

# WOODGROVE AMENITY CENTER

## CONSTRUCTION DRAWINGS

### PROPERTY DATA

**PROJECT NAME:**  
WOODGROVE AMENITY CENTER  
HARNETT COUNTY, NORTH CAROLINA

**PROJECT SCOPE:**  
AMENITY CENTER

**SITE LOCATION:**  
WOODGROVE SUBDIVISION

**DEVELOPER:**  
DR HORTON  
2000 AERIAL CENTER PARKWAY - SUITE 110  
MORRISVILLE, NC 27560  
CONTACT: MR. BRYAN RAGLAND  
PHONE: 919-819-9864

**CIVIL ENGINEER:**  
ARNOLD LAND DESIGN, PLLC  
113 YOSEMITE COURT  
HOLLY SPRINGS, NORTH CAROLINA 27540  
CONTACT: MR. DAVID ARNOLD, PE  
PHONE: 919-630-2552

**PROPERTY INFORMATION:**  
OWNER: WOODGROVE COMMUNITY ASSOCIATION INC.  
DEED BOOK: 4145; PAGE: 0423  
BM. 2022, PG. 156  
PIN NO. 0653-69-7051

**TOWNSHIP:**  
HECTORS CREEK

**PROJECT NET ACREAGE:**  
90,005 SF (2.07 ACRES)

**ZONING CLASSIFICATION:**  
RA-30

**LAND USE CLASSIFICATION:**  
MEDIUM DENSITY RESIDENTIAL (AMENITY CENTER)

HARNETT COUNTY, NC

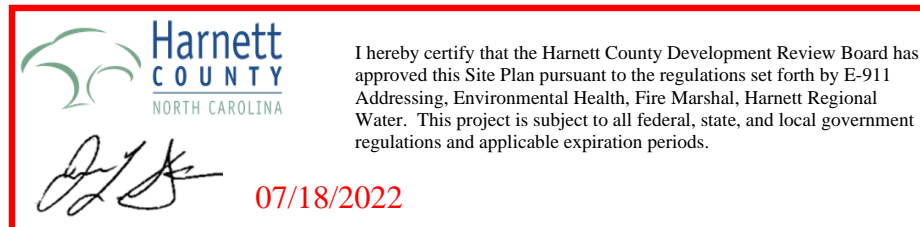
MAY 6, 2022

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VICINITY MAP  
1"=1,000 FT



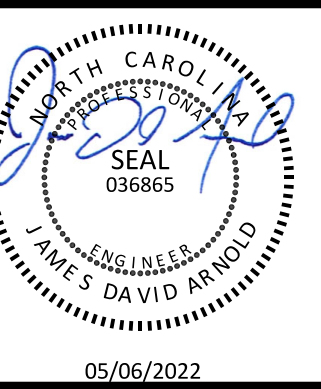
OWNER CERTIFICATE  
AS THE OWNER OF RECORD, I HEREBY FORMALLY CONSENT TO THE PROPOSED DEVELOPMENT SHOWN ON THIS SITE PLAN AND ALL REGULATIONS AND REQUIREMENTS OF THE HARNETT COUNTY ORDINANCE.

Woodgrove Community Association  
OWNER: *[Signature]* DATE: 5-6-22

REVISION DESCRIPTION

DATE

NO.



**ALD**  
ARNOLD LAND DESIGN  
113 YOSEMITE COURT  
HOLLY SPRINGS, NC 27540  
(919) 840-2552

DESIGN BY: JDA  
DATE: 2022-05-06  
SCALE: NTS

DRAWN BY: JDA

WOODGROVE AMENITY CENTER

HARNETT COUNTY, NC  
COVER SHEET

SHEET NO:

C0.0

## HARNETT REGIONAL WATER REQUIRED UTILITY NOTES

### WATER

- A. The Fire Marshal's Office shall approve all hydrant types and locations in new subdivisions. However, Harnett Regional Water (HRW) prefers the contractors to install one of the following fire hydrants:
  1. Mueller - Super Centurion 250 A-423 model with a 5½" main valve opening three way (two hose nozzles and one pumper nozzle); 2. American Darling - Mark B-84-B model with a 5½" main valve opening three way (two hose nozzles and one pumper nozzle); 3. Waterous - Pacer B-67-250 model with a 5½" main valve opening three way (two hose nozzles and one pumper nozzle) or approved equal for standardization.
- B. Fire hydrants are installed at certain elevations. Any grade change near any fire hydrant, which impedes its operation, shall become the responsibility of the Utility Contractor for correction. Corrections will be monitored by the HRW Utility Construction Inspector and the Harnett County Fire Marshal.
- C. The Professional Engineer (PE) shall obtain and provide the NCDEQ "Authorization to Construct" permit to the Utility Contractor before the construction of the water line shall begin. The Utility Contractor must post a copy of the NCDEQ "Authorization to Construct" permit issued by the North Carolina Department of Environmental Quality (NCDEQ) on site prior to the start of construction. The permit must be maintained on site throughout the entire construction process of the proposed water lines that will serve this project.
- D. The Utility Contractor shall notify Harnett Regional Water (HRW) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HRW Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HRW for regular inspection visitations and acceptance of the water system(s). Construction work shall be performed only during the normal working hours of HRW which is 8:00 am – 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HRW.
- E. The Professional Engineer (PE) shall provide HRW and the Utility Contractor with a set of NCDEQ approved plans marked "Released for Construction" at least two days prior to construction commencing. The Registered Land Surveyor (RLS) should stake out all lot corners and the grade stakes for the proposed finish grade for each street before the Utility Contractor begins construction of the water line(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading and utility construction.
- F. The Utility Contractor shall provide the HRW Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of any water line extension(s), and associated water services in Harnett County. The materials to be used on the project must meet the established specifications of HRW and be approved by the Engineer of Record prior to construction. All substandard materials or materials not approved for use in Harnett County found on the project site must be removed immediately when notified by the HRW Utility Construction Inspector.
- G. The water main(s), fire hydrants, service lines, meter setters and all associated appurtenances shall be constructed in strict accordance with the standard specifications of the Harnett Regional Water (HRW). The Utility Contractor shall be responsible to locate the newly installed water main(s), water service lines and all associated meter setters and meter boxes for other utility companies and their contractors until the new water main(s) have been approved by the North Carolina Department of Environmental Quality, Division of Environmental Health, Public Water Supply Section (NCDEQ, DEH, PWS) and accepted by HRW.
- H. Prior to acceptance, all services will be inspected to insure that they are installed at the proper depth. All meter boxes must be flush with the ground level at finish grade and the meter setters must be a minimum of 8" below the meter box lid. Meter setters shall be centered in the meter box and supported by brick, block or stone.
- I. The Utility Contractor shall provide the Professional Engineer (PE) and HRW Utility Construction Inspector with a set of red line drawings identifying the complete water system installed for each project. The red line drawings should identify the materials, pipe sizes and approximate depths of the water lines as well as the gate valves, fire hydrants, meter setters, blow off assemblies and all associated appurtenances for all water line(s) constructed in Harnett County. The red line drawings should clearly identify any deviations from the NCDEQ approved plans. All change orders must be approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- J. Potable water mains crossing other utilities and non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be laid to provide a minimum vertical distance of twenty-four (24") inches between the potable water main and all other utilities. NCDOT requires the new water mains to be installed under the storm water lines. The potable water main shall be installed with twenty-four (24") inches of vertical separation and with ductile iron pipe when designed to be placed under a nonpotable water line such as sanitary sewer or storm sewer lines. If these separations cannot be maintained then the water main shall be installed with ductile iron pipe. Both the potable water main and the non-potable water line must be cast iron or ductile iron pipe (DIP) if the state minimum separations cannot be maintained. The ductile iron pipe must be laid so the mechanical joints are at least (10') feet from the point where the potable water main crosses the non-potable water line.
- K. Potable water mains installed parallel to non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be laid to provide a minimum horizontal distance of ten (10') feet between the potable water main and sanitary sewer mains, sewer laterals and services. The horizontal separation between the potable water main and any other utility or storm sewer shall not be less than five (5') feet. The potable water main must be ductile iron pipe if this horizontal separation of ten (10') feet cannot be maintained. The ductile iron pipe shall extend at least ten (10') feet beyond the point where the minimum required horizontal separation of ten (10') feet can be re-established.
- L. Meter setters shall be installed in pairs on every other lot line where possible to leave adequate space for other utilities to be installed at a later time. The meter setters shall be installed at least one (1') foot inside the right-of-way and at least three (3') to five (5') feet from the property line between the lots.
- M. HRW requires that meter boxes for ¾" services shall be 12" wide x 17" long ABS plastic boxes at least 18" in height with cast iron lids/covers. Meter boxes for 1" services shall be 17" wide x 21" long ABS plastic boxes at least 18" in height with plastic lids and cast iron flip covers in the center of the lids. Meter boxes for 2" services shall be 20" wide x 32" long ABS plastic boxes at least 20" in height with plastic lids and cast iron flip covers in the center of the lids.
- N. Master meters must be installed in concrete vaults sized for the meter assembly and associated appurtenances so as to provide at least eighteen (18") inches of clearance between the bottom of the concrete vault and the bottom of the meter setter. The master meter must be provided test ports if the meter is not equipped with test ports from the manufacturer in accordance with the HRW established standard specifications and details. Ductile iron pipe must be used for the master meter vault piping and valve vault piping. The Utility Contractor must provide shop drawings for the meter vaults to HRW prior to ordering the concrete vaults.
- O. The Utility Contractor will install polyethylene SDR-9 water service lines that cross under the pavement inside a schedule 40 PVC conduit to allow for removal and replacement in the future. Two (2) independent ¾" water service lines may be installed inside one (1) – two (2") inch schedule 40 PVC conduit or two (2) independent 1" water service lines may be installed inside one (1) – three (3") inch schedule 40 PVC conduit, but each water service shall be tapped directly to the water main. Split services are not allowed by HRW. If sidewalks are proposed, the conduit must extend past the sidewalk.
- P. The water main(s), fire hydrants, gate valves, service lines, meter setters and associated appurtenances must be rated for 200 psi and hydrostatically pressure tested to 200 psi. The hydrostatic pressure test(s) must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor must notify HRW when they are ready to begin filling in lines and coordinate with Harnett Regional Water to witness all pressure testing.
- Q. The Utility Contractor shall conduct a pneumatic pressure test using compressed air or other inert gas on the stainless steel tapping sleeve(s) prior to making the tap on the existing water main. This pneumatic pressure test must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor shall use Romac brand stainless steel tapping sleeve(s) or approved equal for all taps made in Harnett County. All new water line extensions must begin with a resilient wedge type gate valve sized equal to the diameter of the new water line extension in order to provide a means of isolation between Harnett Regional Water's existing water mains and the new water line extensions under construction.
- R. All water mains will be constructed with SDR-21 PVC Pipe or Class 50 Ductile Iron Pipe rated for at least 200 psi or greater. All pipes must be protected during loading, transport, unloading, staging, and installation. PVC pipe must be protected from extended exposure to sunlight prior to installation.
- S. All water mains will be flushed and disinfected in strict accordance with the standard specifications of the Harnett Regional Water. All water samples collected for bacteria testing will be collected by the HRW Utility Construction Inspector and tested in the HRW Laboratory.
- T. All fittings larger than two (2") inches diameter shall be ductile iron. HRW requires that mechanical joints be assembled with grip rings as "Megalug" fittings are not approved by Harnett Regional Water for pipe sizes smaller than twelve inches (12") diameter. PVC pipe used for water mains shall be connected by slip joint or mechanical joint with grip rings. Glued pipe joints are not allowed on PVC pipe used for water mains in Harnett County.
- U. HRW requires that the Utility Contractor install tracer wire in the trench with all water lines. The tracer wire shall be 12 ga. insulated, solid copper conductor and it shall be terminated at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on tracer wire installed in Harnett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling.
- V. The Utility Contractor will provide Professional Engineer (PE) and the HRW Utility Construction Inspector with a set of red line field drawings to identify the installed locations of the water line(s) and all associated services. All change orders must be pre-approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- W. The Utility Contractor shall spot dig to expose each utility pipe or line which may conflict with construction of proposed water line extensions well in advance to verify locations of the existing utilities. The Utility Contractor shall provide both horizontal and vertical clearances to the Professional Engineer (PE) to allow the PE to adjust the water line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation and/or securing existing utility poles, pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner's requirements during utility installation, grading and street construction.
- X. Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to have a signed NCDOT encroachment agreement posted on site and notify all concerned utility companies in accordance with G.S. 87-102. The Utility Contractor must call the NC One Call Center at 811 or (800) 632-4949 to verify the location of existing utilities prior to the beginning of construction. Existing utilities shown in these plans are taken from maps furnished by various utility companies and have not been physically located or verified by the P.E. (i.e. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.). The Utility Contractor will be responsible to repair any and all damages to the satisfaction of the related utility company.
- Y. The Utility Contractor shall provide HRW with at least one (1) fire hydrant wrench and one (1) break-away flange kit for every subdivision with fire hydrants developed in Harnett County. These items must be provided to HRW before the final inspection will be scheduled by the HRW Utility Construction Inspector. In addition, the Utility Contractor shall install a 4" x 4" concrete valve marker at the edge of the right-of-way to identify the location of each gate valve installed in the new water system with the exception of the fire hydrant isolation valves. The contractor shall measure the distance from the center of the concrete marker to the center of the valve box. This distance (in linear feet) shall be stamped on the brass plate located on the top of the concrete valve marker. In lieu of installing the concrete valve markers, the Utility Contractor may provide at least two measurements from two independent permanent above ground structures to the Professional Engineer (PE) in the red line drawings to identify the valve locations. The Professional Engineer (PE) must include these measurements in the As-Built Record Drawings submitted to HRW.
- Z. The Utility Contractor will be responsible for any and all repairs due to leakage damage from poor workmanship during the one year warranty period once the water system improvements have been accepted by Harnett Regional Water. Harnett Regional Water will provide maintenance and repairs when requested and bill the Developer and/or Utility Contractor if necessary due to lack of response within 48 hours of notification of warranty work. The Utility Contractor will be responsible for any and all repairs due to damages resulting from failure to locate the new water lines and associated appurtenances for other utilities and their contractors until the water lines have been approved by NCDEQ and accepted by HRW. The final inspection of water system improvements cannot be scheduled with HRW until the streets have been paved; the rights-of-way and utility easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site.
- AA. The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HRW. A copy of each engineer's field report is to be submitted to HRW as each such inspection is made on system improvements or testing is performed by the contractor. Water and sewer infrastructure must pass all tests required by HRW specifications and those of all applicable regulatory agencies. These tests include, but are not limited to: air test, vacuum test, mandrel test, visual test, pressure test, bacteriological test, etc. A HRW

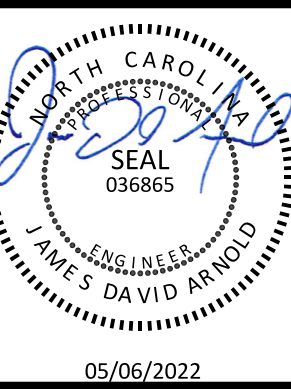
### SANITARY SEWER

- A. The Professional Engineer (PE) shall obtain and supply a copy of the sewer permit for the construction and operation of the wastewater collection system to the Utility Contractor before the construction of the sanitary sewer line, sewer lift station and associated force main shall begin. The Utility Contractor must post a copy of the sewer permit issued by the North Carolina Department of Environmental Quality (NCDEQ) on site prior to the start of construction. The permit must be maintained on site during the construction of the sewer system improvements.
- B. The Utility Contractor shall notify Harnett Regional Water (HRW) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HRW Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HRW for regular inspection visitations and acceptance of the wastewater system(s). Construction work shall be performed only during the normal working hours of HRW which is 8:00 am – 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HRW.
- C. The Professional Engineer (PE) shall provide HRW with a set of NCDEQ approved plans marked "Released for Construction" at least two days prior to construction commencing. HRW will stamp the approved plans as "Released for Construction" and provide copies to the utility contractor. The Registered Land Surveyor (RLS) shall stake out all lot corners and establish grade stakes for the proposed finish grade for each street and sewer line before the Utility Contractor begins construction or installation of the manholes, sanitary sewer gravity line(s), sewer lift stations and/or sanitary sewer force main(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading or utility construction.
- D. The Utility Contractor shall provide the HRW Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of any gravity sewer line(s), manhole(s), sewer lift station(s) and associated force main(s) in Harnett County. The materials to be used on the project must meet the established specifications of HRW and be approved by the Engineer of Record prior to construction. All substandard materials or materials not approved for use in Harnett County found on the project site must be removed immediately when notified by the HRW Utility Construction Inspector.
- E. The sanitary sewer lateral connections should be installed 90° (perpendicular) to the sanitary sewer gravity lines with schedule 40 PVC pipe. HRW requires the Utility Contractor to provide the Professional Engineer (PE) with accurate measurements for locating sanitary sewer service lateral and associated each sanitary sewer clean-out. These measurements should be taken from the nearest downstream manhole up along the sanitary sewer main to the in-line wye fitting (or tapping saddle) and then another measurement from the in-line wye fitting (or tapping saddle) to the 4" x 4" long sweep combination wye fitting at the bottom of the sewer clean-out stack. These field measurements must be provided to the Professional Engineer (PE) in the red line drawings from the Utility Contractor for proper documentation in the As-Built Record Drawings submitted to HRW.
- F. The Utility Contractor shall be responsible to locate the newly installed sanitary sewer gravity line(s), sanitary sewer force main(s), sanitary sewer service lateral(s) and all associated sewer clean-out(s) in the proposed sanitary sewer system for other utility companies and their contractors until the new sanitary sewer line(s) and associated appurtenances have been approved by the North Carolina Department of Environmental Quality (NCDEQ) and accepted by HRW. All new sanitary sewer lines must have at least three (3 ft.) feet of cover and extend under all existing water main and storm water lines with a least 24" of vertical clearance below the bottom of the existing water main and storm water lines. All ductile iron sewer piping must be 401 epoxy coated or approved equal.
- G. The sanitary sewer gravity line(s), manhole(s), sanitary sewer service lateral(s) and associated clean-out(s) shall be constructed in strict accordance with the standard specifications of the Harnett Regional Water. The sanitary sewer gravity line(s) must pneumatically pressure tested with compressed air at 5 psi and the sanitary sewer force main(s) must hydrostatically pressure tested with water or air at 200 psi. Sanitary sewer manholes must be vacuum tested to 10 inches of mercury and cannot drop below 9 inches in 60 seconds for 4 ft. diameter manholes, 75 seconds for 5 ft. diameter manholes. The test must be in accordance with the following standards: For ductile iron pipelines test in accordance with the applicable requirements of ASTM C924. For PVC pipelines test in accordance with ASTM F1417-98 and UBPPA UNI-6. Vacuum testing shall be performed in accordance with ASTM C1244. The HRW Utility Construction Inspector and Engineer must witness all tests mentioned above.
- H. Prior to acceptance, all sewer service laterals will be inspected to insure that they are installed at the proper depth. All sewer clean-outs must be installed so the 4" x 4" long sweep combination wye is at least three (3') feet but no more than four (4') feet below the finish grade unless otherwise approved in writing by HRW. The sewer cleanouts shall have a four (4") schedule 40 PVC pipe stubbed up from both ends of the 4" x 4" long sweep combination wye to be at least two (2') feet above the finish grade and cover each end with a four (4") inch temporary cap to keep out dirt, sand, rocks, water and construction debris. The vertical stack on each clean-out must be provided with a concrete donut for protection.
- I. Once the sanitary sewer gravity line(s) have been installed, pneumatically pressure tested and in place for at least 30 days, the Utility Contractor must contact the HRW Utility Construction Inspector to witness the mandrel test on each PVC sanitary sewer gravity line. The Utility Contractor will notify HRW to schedule the mandrel testing. The mandrel and proving ring must be supplied by the Utility Contractor. Closed circuit video camera inspections (at the Utility Contractor's expense) may be required by the HRW Utility Construction Inspector if the mandrel and mirror tamping testing cannot be completed with satisfactory results. The sanitary sewer lines should be flushed clean using a sewer ball of the proper diameter before any mandrel testing can be performed. The Utility Contractor is responsible to remove all dirt, sand, silt, gravel, mud and debris from the newly constructed sewer lines exercising care to keep the Harnett Regional Water's existing sanitary sewer systems clean. Sanitary sewer force main(s) shall be pressure tested to 200 psi for at least 2 hours like water lines.
- J. The Utility Contractor shall be responsible to locate the newly installed sanitary sewer system(s) for other utility companies and their contractors until the new sanitary sewer system(s) have been approved by the North Carolina Department of Environmental Quality (NCDEQ) and accepted by HRW.
- K. HRW requires that the Utility Contractor install tracer wire in the trench with all sanitary sewer force mains. The tracer wire shall be 12 ga. insulated, solid copper conductor and it shall be terminated at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on tracer wire installed in Harnett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling. The tracer wire is not required for the gravity sewer line(s) between manholes.
- L. The Utility Contractor shall provide the Professional Engineer (PE) and HRW Utility Construction Inspector with a set of red line drawings identifying the complete sewer system installed for each project. The red line drawings should identify the materials, pipe sizes and approximate depths of the sewer lines as well as the installed locations of the manhole(s), sanitary sewer gravity line(s), sanitary sewer service laterals, clean-outs, sewer lift station(s) and associated force main(s). The red line drawings should clearly identify any deviations from the NCDEQ approved plans. All change orders must be approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- M. Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to notify all concerned utility companies in accordance with G.S. 87-102. The Utility Contractor must call the NC One Call Center at 811 or (800) 632-4949 to verify the location of existing utilities prior to the beginning of construction. Existing utilities shown in these plans are taken from maps furnished by various utility companies and have not been physically located by the P.E. (i.e. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.).
- N. The Utility Contractor shall spot dig to expose each existing utility pipe or line which may conflict with construction of proposed sanitary sewer line extensions well in advance to verify locations of the existing utilities. The Utility Contractor shall provide both horizontal and vertical clearances to the Professional Engineer (PE) to allow the PE to adjust the sanitary sewer line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation of existing utilities and/or securing existing utility poles, pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner's requirements during sanitary sewer line installation, grading and street construction.
- O. When making a tap on an existing sewer force main, the Utility Contractor must have a permit from the North Carolina Department of Environmental Quality (NCDEQ) prior to begin the tap work. The Utility Contractor shall conduct a pneumatic pressure test using compressed air or other inert gas on the stainless steel tapping sleeve and gate valve prior to making the tap on an existing sanitary sewer force main. This pneumatic pressure test must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor shall use Romac brand stainless steel tapping sleeve(s) or approved equal for all taps made on sanitary sewer force mains in Harnett County. The Utility Contractor shall use Romac brand Style "CB" sewer saddles with stainless steel bands or approved equal for all taps made on existing sanitary sewer gravity lines in Harnett County.
- P. The Utility Contractor shall provide a grease trap for each sanitary sewer service lateral that will be connected to a restaurant, food processing facility and any other commercial or industrial facility as required by the Harnett County Fat, Oil & Grease Ordinance. The grease trap must be rated for a minimum capacity of at least 1,000 gallons unless otherwise approved in writing by the HRW Pre-Treatment Coordinator. Garbage disposals should not be installed in homes and businesses that discharge wastewater to the Harnett Regional Water's Sanitary Sewer System as they are not approved by HRW.
- Q. Each sewer lift station must be provided with three phase power (at least 480 volts) and constructed to meet the minimum requirements of the latest version of the National Electrical Code (NEC) and Harnett Regional Water standard specifications and details. If three phase power is not available from the power company other arrangements must be approved by HRW Engineering prior to the start of construction.
- R. Where a new sanitary sewer force main is connected to an existing manhole in the Harnett Regional Water sewer collections system, the Utility Contractor must provide a protective coating (epoxy) for the interior surfaces of the manhole to protect it against corrosion, erosion and deterioration from the release of sewer gases such as methane and hydrogen sulfide.
- S. The sewer lift station design and associated equipment must meet or exceed the MINIMUM REQUIREMENTS FOR HARNETT COUNTY SEWER LIFT STATIONS. Each sanitary sewer lift station must be constructed with an all-weather access road that is at least 20 feet wide. The lift station site must be covered with weed blocking material and at least six (6") inches of ABC stone (crush and run).
- T. Once a sewer lift station has been installed, the Utility Contractor is responsible to schedule a draw down test with HRW Engineering and Collections staff, the Professional Engineer (PE), the Electrician, the origin equipment manufacturers (OEM) representatives [for both the Pumps and the Generator]. This draw down test must be completed with power supplied from the electrical utility company and with power supplied by the emergency generator with satisfactory results before final inspections are conducted by the HRW Utility Construction Inspector.
- U. Once the Utility Contractor completes the installation of a sewer lift station, the Professional Engineer (PE) must submit the sewer permit certification and As-Built Record Drawings to the North Carolina Department of Environmental Quality (NCDEQ) and HRW for final approval. The Utility Contractor must supply HRW Engineering staff with three original Operation & Maintenance (O&M) Manuals along with the associated pump curves and electrical schematics for the associated sewer lift station equipment including all warranty information and documentation.
- V. Once the Utility Contractor completes the installation of a sewer lift station, the Developer must pay HRW the established System Control and Data Acquisition (SCADA) fees before the SCADA system will be installed at the new sewer lift station. The SCADA system must be installed and operational before the utilities may be accepted by HRW and placed into operation.
- W. HRW requires the Utility Contractor to provide all necessary equipment and devices for the testing and inspection of the sanitary sewer system. The equipment and devices may include but not limited to lamping with mirrors, mandrels, sewer balls, plugs, air compressors and associated compressed air lines. If the HRW Utility Construction Inspector deems that a closed circuit video camera inspection of the newly constructed sewer system is necessary, then all costs for the closed circuit camera inspection will be the responsibility of the Utility Contractor. All closed circuit video camera inspections must be recorded on VHS tapes that will be released to HRW for record keeping, review and approval of the sewer system.
- X. Any use of sewer plugs to temporarily block Harnett Regional Water's existing sanitary sewer lines must be coordinated with the HRW Collections Supervisor at least two (2) days in advance of installing the plugs. The sewer plugs must be removed as soon as possible once the new sanitary sewer lines have been inspected, pressure tested, mandrel tested, approved by the North Carolina Department of Environmental Quality (NCDEQ) and accepted by HRW to allow the sewer to flow as designed in Harnett Regional Water's existing sanitary sewer lines or wye so ordered by the HRW Collections Supervisor to limit interruptions to the normal flow of the sanitary sewer collection system(s). The Utility Contractor must provide the pumps hoses and necessary connectors for a temporary pump around setup if required by the HRW Collections Supervisor. Mr. Randolph Clegg, HRW Collections Supervisor may be contacted between 8:00 am and 5:00 pm Monday through Friday at (910) 893-7575 extension 3241.
- Y. The Utility Contractor will be responsible for any and all repairs due to leakage or damage resulting from poor workmanship during the one (1) year warranty period once the sewer system improvements have been approved by the North Carolina Department of Environmental Quality (NCDEQ) and accepted by HRW. The Utility Contractor will be responsible for any and all repairs due to damages resulting from failure to locate the new sanitary sewer lines and associated appurtenances for other utilities and their contractors until the sanitary sewer lines have been approved by NCDEQ and accepted by HRW. HRW will provide maintenance and warranty repairs if necessary due to lack of response within 48 hours of notification of warranty work. HRW will invoice the Developer and/or Utility Contractor for materials and labor in such cases.
- Z. In developments and projects that require utility easements to be established for future HRW right-of-way, the Registered Land Surveyor (RLS) must provide the HRW Right-of-Way Agent with an official copy of the recorded plat and legal description of the said easement as recorded with the Harnett County Register of Deeds. The recorded documents must be provided to the HRW Right-of-Way Agent before the utility improvements within the said easement can be placed into operation. Any and all easements that must be obtained from adjoining property owners must be provided to HRW by the Developer at no cost to Harnett County. The final inspection of all sanitary sewer system improvements cannot be scheduled with HRW until the streets have been paved; the rights-of-way and utility easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site.
- AA. The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HRW. A copy of each engineer's field report is to be submitted to HRW as each such inspection is made on system improvements or testing is performed by the contractor. Water and sewer infrastructure must pass all tests required by HRW specifications and those of all applicable regulatory agencies. These tests include, but are not limited to: air test, vacuum test, mandrel test, visual test, pressure test, bacteriological test, etc. A HRW

REVISION DESCRIPTION

DATE

NO.



05/06/2022

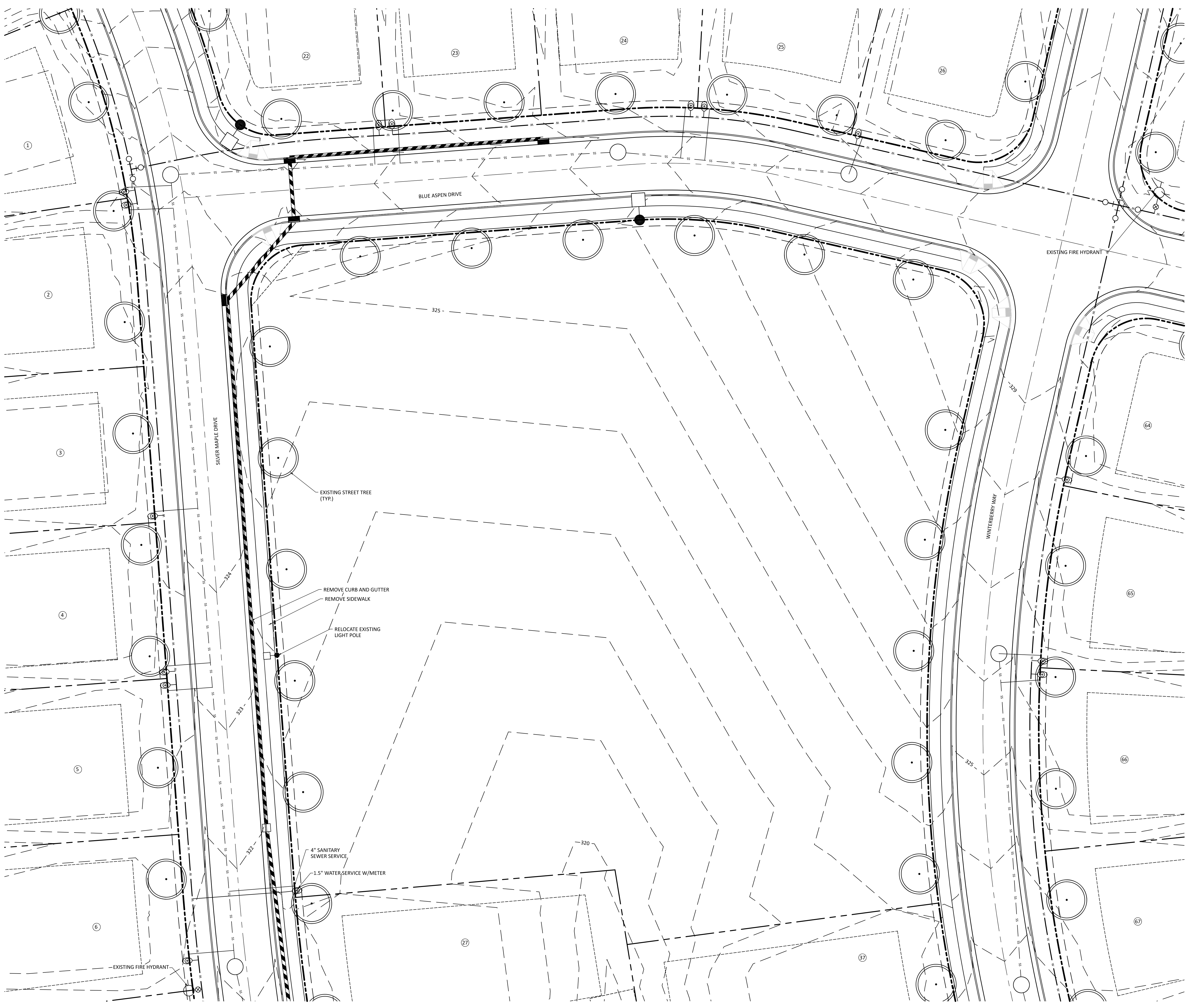
**ALD**  
ARNOLD LAND DESIGN  
113 YOSEMITE COURT  
HOLLY SPRING, NC 27540  
(919) 980-2582

DESIGN BY:	JDA
DATE:	2022-05-06
SCALE:	NTS
DRAWN BY:	JDA

WOODGROVE AMENITY CENTER  
HARNETT COUNTY, NC  
HARNETT REGIONAL WATER UTILITY NOTES

SHEET NO:

**C0.1**



EXISTING SITE DATA	
PARCEL PIN(S)	0653-69-7051
ZONING	RA-30
AMENITY CENTER AREA	2.07 ACRES
EXISTING USE	VACANT
RIVER BASIN	CAPE FEAR

- EXISTING CONDITIONS SOURCES**
- EXISTING SITE FEATURES (ROADWAYS, SANITARY SEWER, WATER, GASEMENTS, STORM DRAINAGE, ETC) TAKEN FROM A CAD FILE CREATED BY TIMMONS GROUP AND PROVIDED TO ARNOLD LAND DESIGN ON MARCH 31, 2022.
  - EXISTING TOPOGRAPHY TAKEN FROM A CAD FILE CREATED BY TIMMONS GROUP AND PROVIDED TO ARNOLD LAND DESIGN ON MARCH 31, 2022.

- ENVIRONMENTAL CONDITIONS NOTES**
- THIS PROPERTY LIES WITHIN THE CAPE FEAR RIVER BASIN.
  - THIS PROPERTY IS NOT LOCATED IN A FLOODPLAIN.
  - THERE ARE NO STREAM BUFFERS WITHIN THE AMENITY CENTER PROJECT LIMITS.
  - THERE ARE NO WETLANDS WITHIN THE AMENITY CENTER PROJECT LIMITS.

REVISION DESCRIPTION	
NO.	
DATE	

05/06/2022

# ALD

ARNOLD LAND DESIGN  
113 YOSEMITE COURT  
HOLLY SPRING, NC 27540  
(919) 880-2524

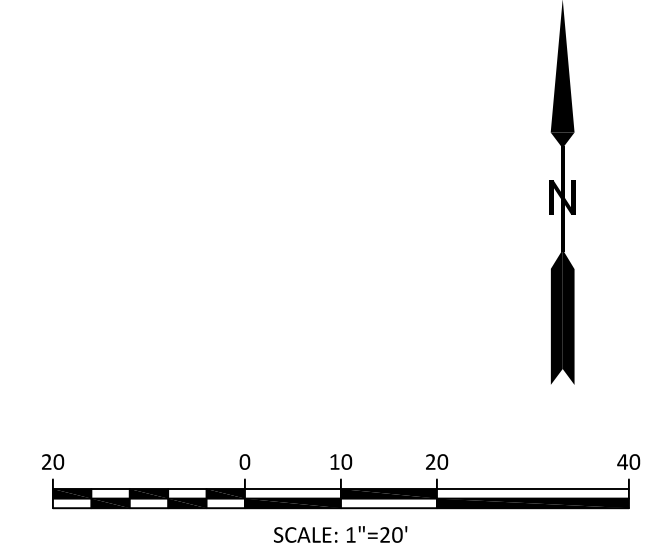
DATE:	2022-05-06	DESIGN BY:	JDA
SCALE:	1"=20'	DRAWN BY:	JDA

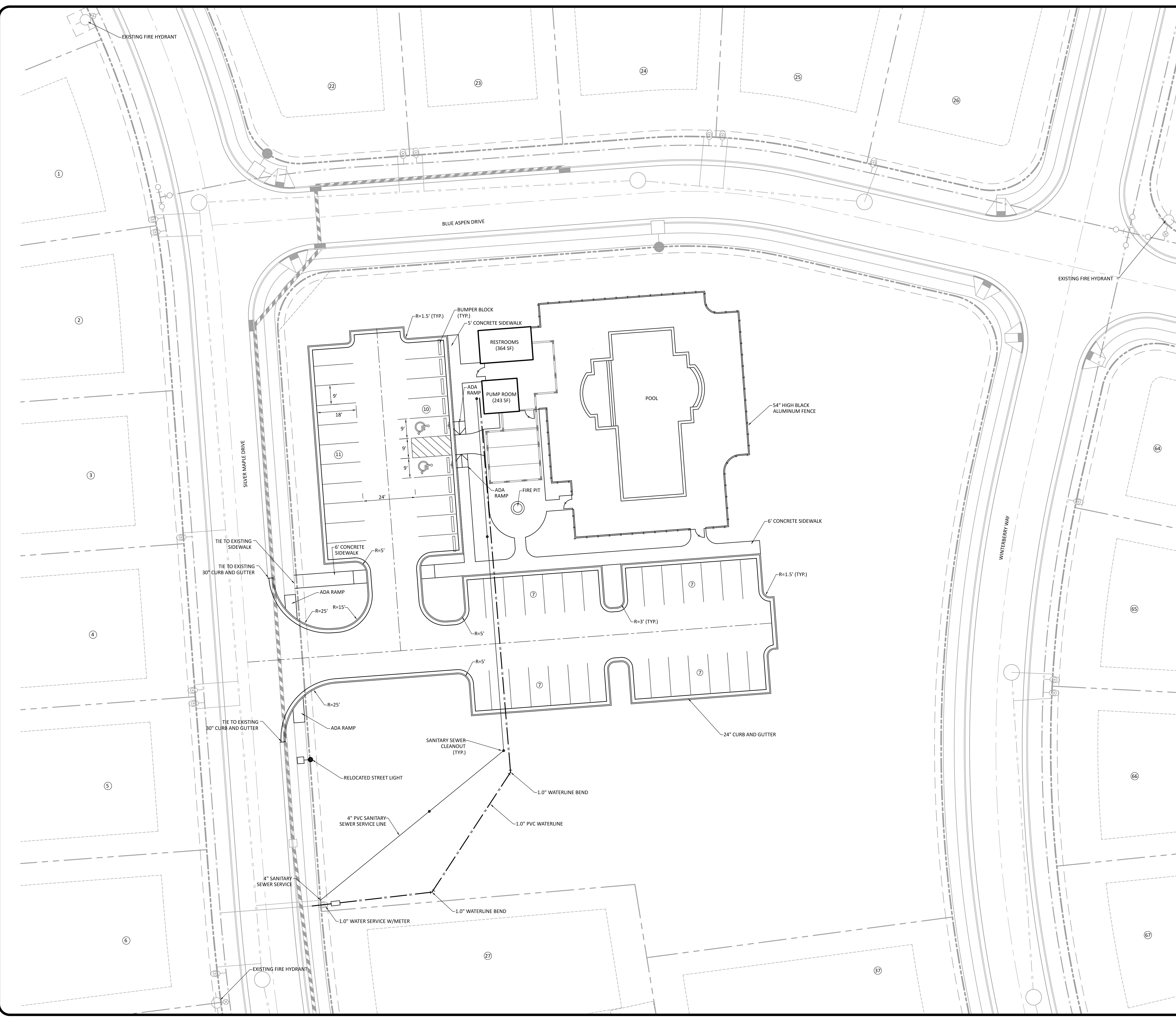
## WOODGROVE AMENITY CENTER

HARNETT COUNTY, NC

### EXISTING CONDITIONS PLAN

SHEET NO:  
**C1.0**





**GENERAL NOTES**

1. THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS AND SURVEYOR SHALL CONFIRM THAT THE MOST CURRENT SET OF PLANS AND/OR PLAN SHEETS(S) ARE BEING USED FOR CONSTRUCTION AND SHALL KEEP A COPY OF SAID PLANS ON-SITE OR OTHERWISE AVAILABLE FOR REVIEW BY THE OWNER, THE OWNER'S REPRESENTATIVE(S) AND THE PERMITTING AUTHORITIES.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PERMITTING AUTHORITIES AND A REPRESENTATIVE OF THE OWNER.
3. THE CONTRACTOR SHALL CONFIRM THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED FOR THE PROPOSED CONSTRUCTION. BEGINNING ANY ASPECT OF CONSTRUCTION OR FABRICATING ANY ITEM PRIOR TO RECEIVING ALL PLANS AND APPROPRIATE DOCUMENTATION OF APPROVAL SHALL CAUSE THE CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ANY SUBSEQUENT MODIFICATIONS TO THEIR WORK.
4. THE CONTRACTOR SHALL CONFIRM THAT ALL CONSTRUCTION AND CONSTRUCTION MATERIALS ARE IN ACCORDANCE WITH THE PERMITS ISSUED AND THE LATEST APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN.
5. THE CONTRACTOR SHALL DETERMINE AND BE RESPONSIBLE FOR THE MEANS AND METHODS NECESSARY FOR THE CONSTRUCTION OF THE PROJECT AS SHOWN ON THESE PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE PERMITTING AUTHORITY TO PROVIDE THE REQUIRED COORDINATION, DOCUMENTATION AND INSPECTIONS FOR THE RELOCATION OF, OR CONNECTION TO ANY EXISTING UTILITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSPECTIONS REQUIRED TO PREPARE AS-BUILT CERTIFICATIONS.
8. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ANY OFFSITE EASEMENTS.
9. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY RIGHT OF WAY EASEMENTS AND ENCROACHMENT AGREEMENTS HAVE BEEN OBTAINED.
10. THE CONTRACTOR SHALL CONFIRM THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION PRIOR TO BEGINNING CONSTRUCTION AND NOTIFY THE OWNER OR ENGINEER OF ANY DISCREPANCIES. BEGINNING CONSTRUCTION PRIOR TO LOCATING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND NOTIFYING THE OWNER OR ENGINEER OF ANY DISCREPANCIES SHALL CAUSE THE CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ANY SUBSEQUENT MODIFICATIONS TO THEIR WORK.
11. DEPARTURES FROM THE APPROVED CONSTRUCTION DRAWINGS, MUNICIPAL SPECIFICATIONS OR ISSUED PERMITS THAT ARE DEEMED NECESSARY SHALL COORDINATE WITH THE APPROPRIATE PERMITTING AUTHORITY. CHANGES MADE WITHOUT THE APPROPRIATE APPROVAL SHALL CAUSE THE CONTRACTOR TO ASSUME RESPONSIBILITY FOR ANY SUBSEQUENT MODIFICATIONS TO THEIR WORK.
12. THE STAKING SURVEYOR AND/OR THEIR SUBCONTRACTOR SHALL INDEPENDENTLY VERIFY THE HORIZONTAL AND VERTICAL DATUM FOR THIS PROJECT PRIOR TO CONSTRUCTION.
13. THE CONTRACTOR SHALL NOTE THAT THE PLANS DO NOT SHOW ELEVATION, OFFSET, TRANSITION, FITTING ETC. THAT MAY BE REQUIRED FOR CONSTRUCTION.
14. ALL GRADING, SLOPES TO BUILDING ACCESS/EGRESS POINTS, HANDICAP RAMPS, STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE.

**GENERAL UTILITY CONSTRUCTION NOTES**

1. ALL WATER DISTRIBUTION AND SANITARY SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE HARNETT REGIONAL WATER STANDARDS AND SPECIFICATIONS FOR WATER AND SEWER.
2. CONSTRUCTION MATERIALS SHALL BE AS SPECIFIED BY HARNETT REGIONAL WATER.
3. EXISTING MAINS ARE SHOWN TO THE EXTENT POSSIBLE AND ARE GENERALLY NOTED "APPROXIMATE LOCATION, DEPTH UNKNOWN". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE EXISTING FACILITIES BY DIGGING A TEST PIT TO VERIFY EXISTING MAIN LOCATION, SIZE, DEPTH, AND MATERIAL.
4. THE CONTRACTOR SHALL OBTAIN A UTILITY LOCATION FOR ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE LOCATION OF KNOWN UTILITIES IS SHOWN ON THE PLAN TO THE EXTENT POSSIBLE. ALL DISCREPANCIES SHALL BE NOTED AND DISCUSSED WITH THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY HARNETT REGIONAL WATER PRIOR TO TAPPING ANY MAIN, TURNING ANY EXISTING VALVES, OR BEGINNING CONSTRUCTION ON ANY SEGMENT OF THE PROJECT. A CURRENT COPY OF THE APPROVED DESIGN PLANS, ENCROACHMENT AGREEMENTS, AND SPECIFICATIONS OF THE UTILITY SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
6. MAIN LOCATIONS, VALVE LOCATIONS, HYDRANT LOCATIONS, AND SERVICE LOCATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES. REFER TO STANDARD DETAILS FOR PRECISE LOCATION OF THESE ITEMS.

**TRASH COLLECTION**

1. TRASH COLLECTION TO BE PROVIDED VIA ROLL-OUT TRASH CANS.

**MAINTENANCE**

1. THE WOODGROVE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE POOL, CLUBHOUSE, PARKING AREAS, LANDSCAPING, AND OTHER SITE FEATURES WITHIN THE AMENITY AREA.

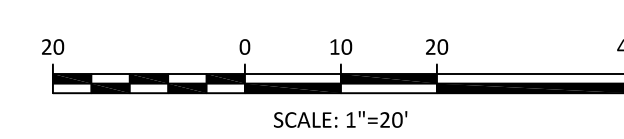
**PARKING CALCULATIONS**

REQUIRED PARKING FOR CLUBHOUSE (1 SPACES / 200 SF)	9 SPACES
REQUIRED PARKING FOR POOL	20 SPACES
TOTAL REQUIRED PARKING	29 SPACES
TOTAL PROVIDED PARKING	49 SPACES

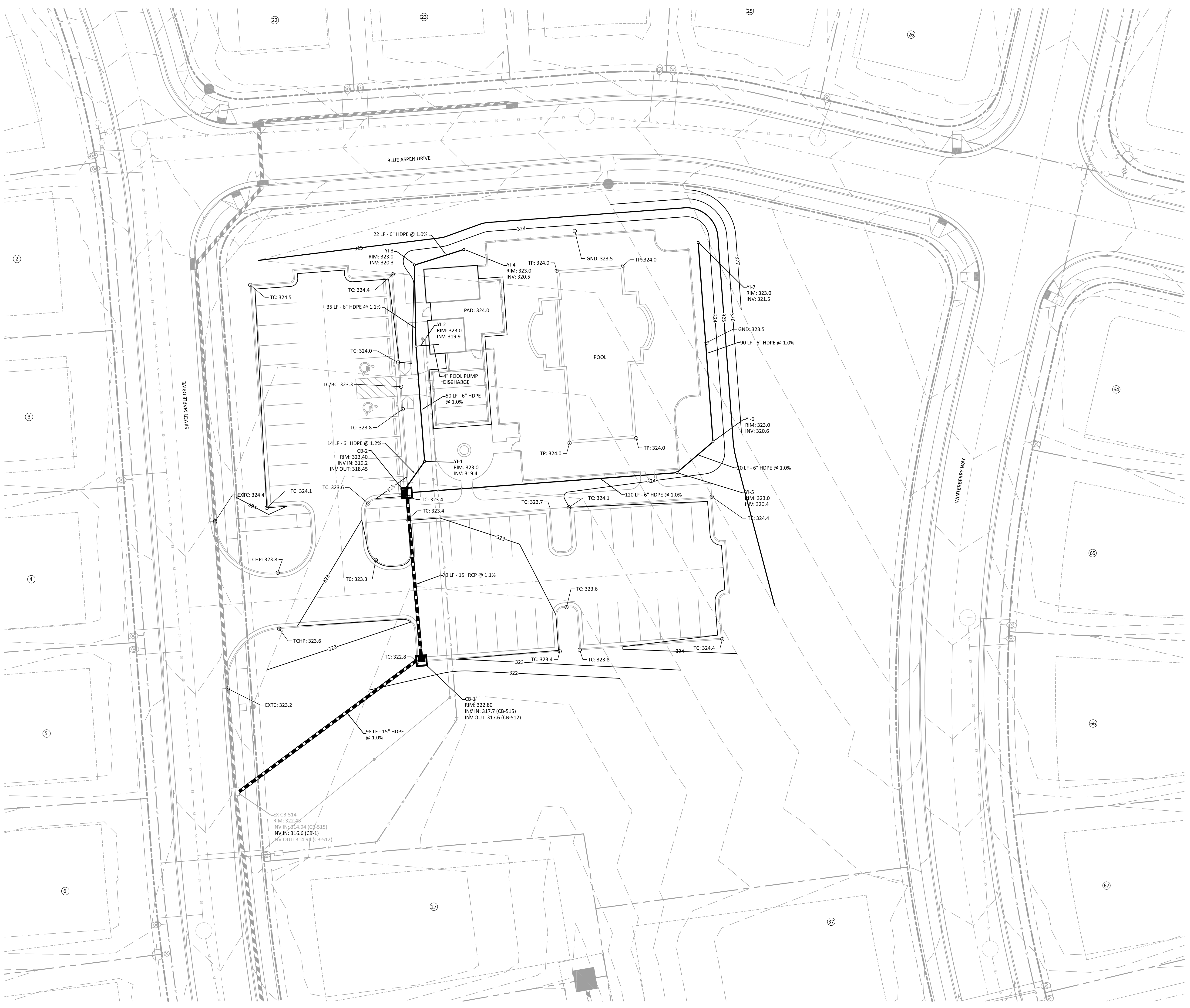
THESE PLANS ARE FOR THE CONSTRUCTION OF THE WOODGROVE AMENITY CENTER ONLY. REFER TO APPROVED WOODGROVE CONSTRUCTION DRAWINGS PREPARED BY TIMMONS GROUP FOR ALL INFRASTRUCTURE AND LOT DESIGN.

**SITE/UTILITY PLAN LEGEND**

- PROPERTY BOUNDARY
- RIGHT-OF-WAY
- PROPERTY LINE
- EASEMENT
- FENCE
- SANITARY SEWER PIPE
- SANITARY SEWER CLEANOUT
- WATER PIPE
- WATER FITTINGS



REVISION DESCRIPTION											
DATE											
NO.											
<p><b>ALD</b> ARNOLD LAND DESIGN 113 YOSEMITE COURT HOLLIS, NC 27540 (919) 890-2574</p>											
<p><b>WOODGROVE AMENITY CENTER</b> HARNETT COUNTY, NC <b>SITE AND UTILITY PLAN</b></p>											
<p>DESIGN BY: JDA DATE: 2022-05-06 SCALE: 1"=20'</p>											
<p>PROPERTY: WOODGROVE AMENITY CENTER SHEET NO: <b>C2.0</b></p>											



- ### GRADING NOTES
1. PROPOSED CONTOURS REPRESENT APPROXIMATE ELEVATIONS AT A POINT. PROPOSED SPOT ELEVATIONS SUPERCEDE CONTOUR INFORMATION.
  2. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS AND SHALL MAINTAIN ADEQUATE DRAINAGE DURING CONSTRUCTION.
  3. ALL GRADING, BACKFILLING, EXCAVATION, ETC. SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE LOCAL GOVERNING AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR COORDINATING ALL CONSTRUCTION ACTIVITIES WITH SAID AUTHORITY.
  4. CONTRACTOR IS TO CONTACT NORTH CAROLINA "ONE CALL" AT 811 FOR UNDERGROUND UTILITY LOCATION 48 HOURS PRIOR TO ANY DIGGING.
  5. CONTRACTOR SHALL LOCATE AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  6. ANY AND ALL DISTURBED AREAS SHALL BE FINE GRADED, SEEDED WITH PERMANENT GRASS SEEDING MIX AND STRAWED PRIOR TO DEMOBILIZATION FROM THE SITE.
  7. SLOPES STEEPER THAN 3H:1V SHOULD BE EVALUATED AND DESIGNED BY A GEOTECHNICAL ENGINEER.
  8. THE CONTRACTOR SHALL NOTE THAT SPILL CURB SHALL BE USED AS NECESSARY IN PARKING AREAS, AT INTERSECTIONS, AT MEDIANS TO ELIMINATE AREAS OF STANDING WATER IN THE CURB.

- ### STORM DRAINAGE NOTES
1. RIM ELEVATION FOR A CATCH BASIN (CB) OR CURB INLET (CI) IS TOP OF CURB (TC). RIM ELEVATION FOR DROP INLET (DI) OR WARD INLET (WI) IS TOP OF BOX OR TOP OF GRATE (NOT SLAB). RIM ELEVATION FOR A MANHOLE (MH) OR JUNCTION BOX (JB) IS CENTER OF THE STRUCTURE COVER.
  2. ALL STORM DRAINAGE PIPES SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) UNLESS NOTED OTHERWISE.
  3. ALL STORM DRAINAGE PIPE IN TRAFFIC AREAS SHALL HAVE A MINIMUM COVER OF 2 FEET TO THE PIPE CROWN UNLESS OTHERWISE APPROVED.
  4. ALL STORM DRAINAGE PIPE IN TRAFFIC NON-AREAS SHALL HAVE A MINIMUM COVER OF 1 FOOT TO THE PIPE CROWN UNLESS OTHERWISE APPROVED.
  5. ALL CONCRETE SHALL MEET A MINIMUM 3000 PSI COMPRESSIVE STRENGTH.
  6. ALL PIPE IN STORM DRAINAGE STRUCTURES SHALL BE STRUCK EVEN WITH THE INSIDE WALL.
  7. ALL PIPE JOINTS SHALL BE MADE WITH PREFORMED JOINT SEALER WHICH CONFORMS TO AASHTO SPECIFICATION M-198 FOR TYPE B FLEXIBLE PASTIC GASKETS UNLESS OTHERWISE NOTED.
  8. EACH DRAINAGE STRUCTURE SHALL HAVE A SHAPED INVERT CONSTRUCTED FROM CONCRETE, AND A BENCH WITH A MAXIMUM 5:1 SLOPE. THE BENCH SHALL BEGIN AT A HEIGHT OF ONE-HALF THE PIPE DIAMETER FOR 12 TO 24 INCH PIPE, ONE-THIRD THE PIPE DIAMETER FOR 30 - 48 INCH PIPE, AND ONE-FOURTH THE DIAMETER FOR PIPE GREATER THAN 48 INCHES.
  9. ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATIVE MATTER, WASTE, CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. SUITABLE SOILS SHALL BE CAPABLE OF COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER DAMPING BLOWS OR PROOF ROLLING.
  10. MATERIALS DEEMED AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
  11. BACKFILLING OF TRENCHES SHALL BE PERFORMED IMMEDIATELY AFTER PIPE IS LAID. THE FILL AROUND AND ABOVE THE PIPE SHALL BE COMPACTED IN ACCORDANCE WITH THE PERMITTING AUTHORITY'S SPECIFICATIONS AND/OR THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
  12. UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.

NOTE: STORMWATER MANAGEMENT DESIGNED AND PERMITTED BY OTHERS AS PART OF OVERALL WOODGROVE SUBDIVISION.

AMENITY IMPERVIOUS ALLOWED (PER SCM DESIGN): 45,000 SF  
 IMPERVIOUS PROVIDED PER AMENITY DESIGN: 29,820 SF

PROPOSED POOL SHALL DISCHARGE TO ON-SITE STORM DRAINAGE SYSTEM AND FLOW INTO ROADWAY STORM DRAINAGE SYSTEM.

THESE PLANS ARE FOR THE CONSTRUCTION OF THE WOODGROVE AMENITY CENTER ONLY. REFER TO APPROVED WOODGROVE CONSTRUCTION DRAWINGS PREPARED BY TIMMONS GROUP FOR ALL INFRASTRUCTURE AND LOT DESIGN.

### GRADING/DRAINAGE PLAN LEGEND

EX. MAJOR (2') CONTOUR (GIS)\*

EX. MINOR (10') CONTOUR (GIS)\*

PROPOSED MAJOR (10') CONTOUR

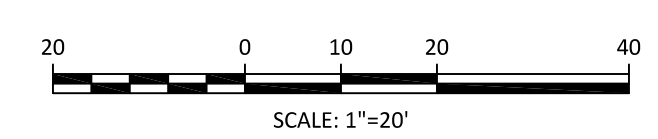
PROPOSED MINOR (2') CONTOUR

STORM DRAINAGE PIPE

STORM DRAINAGE STRUCTURES

SPOT ELEVATIONS

TOP OF CURB	TC: XXX.XX
TOP OF POOL	TP: XXX.XX
GROUND	GND: XXX.XX
EXISTING TOP OF CURB	EXTC: XXX.XX



NO.	REVISION DESCRIPTION	DATE

05/06/2022

**ALD**  
 ARNOLD LAND DESIGN  
 113 YOSEMITE COURT  
 HOLLISTON, NC 27540  
 (919) 890-2574

WOODGROVE AMENITY CENTER  
 HARNETT COUNTY, NC  
 GRADING AND DRAINAGE PLAN

SHEET NO:  
**C3.0**



- GENERAL EROSION AND SEDIMENT CONTROL NOTES:**
1. EXCAVATION AND EARTH MOVING OPERATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE OWNERS GEOTECHNICAL ENGINEER.
  2. ALL CONSTRUCTION SHALL COMPLY WITH HARNETT COUNTY AND NCDENR STANDARDS AND SPECIFICATIONS.
  3. VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITIES SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND FROM A SURVEY OF ABOVE GROUND FEATURES. NO WARRANTY IS GIVEN OR IMPLIED AS TO THE ACCURACY OF THE INFORMATION. ALL EXISTING UTILITIES SHOULD BE CONSIDERED APPROXIMATE IN LOCATION AND VERIFIED PRIOR TO COMMENCING ACTIVITY ON SITE.
  4. STABILIZE DISTURBED AREAS WITH TEMPORARY VEGETATION. DENUDED AREAS MUST BE SEEDED WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION.
  5. ENSURE THAT ALL TEMPORARY DIVERSIONS ARE INSTALLED WITH POSITIVE DRAINAGE AND SHALL OPPOSE EXISTING GRADE WHEN NECESSARY TO PROVIDE A MINIMUM OF 1.0% LONGITUDINAL SLOPE.
  6. ALL PAVED AREAS SHALL BE KEPT CLEAN AND ENSURE NO EARTH MATERIALS AND DEBRIS COLLECT ON THE ROADWAYS. THE SITE SHALL BE MAINTAINED AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.
  7. INSPECT AND PROPERLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EVERY RAINFALL EVENT.
  8. INSTALL ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT RUNOFF.

SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

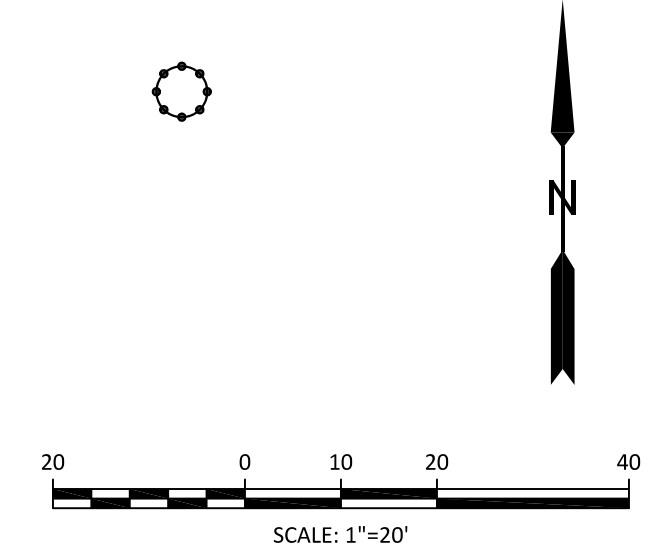
1. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
2. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

NOTE: EROSION CONTROL DESIGNED AND PERMITTED BY OTHERS AS PART OF OVERALL WOODGROVE SUBDIVISION.

THESE PLANS ARE FOR THE CONSTRUCTION OF THE WOODGROVE AMENITY CENTER ONLY. REFER TO APPROVED WOODGROVE CONSTRUCTION DRAWINGS PREPARED BY TIMMONS GROUP FOR ALL INFRASTRUCTURE AND LOT DESIGN.

**EROSION CONTROL PLAN LEGEND**

- SILT FENCE — SF — SF — SF — SF
- SILT FENCE OUTLET
- CONSTRUCTION ENTRANCE
- INLET PROTECTION



NO.	DATE	REVISION DESCRIPTION
05/06/2022		
<p><b>ALD</b> ARNOLD LAND DESIGN 113 YOSEMITE COURT HOLLIS, NC 27540 (919) 880-2524</p>		
DATE:	DESIGN BY:	DRAWN BY:
2022-05-06	JDA	JDA
SCALE:	1"=20'	
<p>WOODGROVE AMENITY CENTER</p> <p>HARNETT COUNTY, NC</p> <p>EROSION CONTROL PLAN</p>		
SHEET NO:		
<b>C4.0</b>		









**GENERAL NOTES**

1. THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS AND SURVEYOR SHALL CONFIRM THAT THE MOST CURRENT SET OF PLANS AND/OR PLAN SHEETS(S) ARE BEING USED FOR CONSTRUCTION AND SHALL KEEP A COPY OF SAID PLANS ON-SITE OR OTHERWISE AVAILABLE FOR REVIEW BY THE OWNER, THE OWNER'S REPRESENTATIVE(S) AND THE PERMITTING AUTHORITIES.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION CONFERENCE WITH REPRESENTATIVES OF THE PERMITTING AUTHORITIES AND A REPRESENTATIVE OF THE OWNER.
3. THE CONTRACTOR SHALL CONFIRM THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED FOR THE PROPOSED CONSTRUCTION. BEGINNING ANY ASPECT OF CONSTRUCTION OR FABRICATING ANY ITEM PRIOR TO RECEIVING ALL PLANS AND APPROPRIATE DOCUMENTATION OF APPROVAL SHALL CAUSE THE CONTRACTOR TO ASSUME FULL RESPONSIBILITY FOR ANY SUBSEQUENT MODIFICATIONS TO THEIR WORK.
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5. THE CONTRACTOR SHALL DETERMINE AND BE RESPONSIBLE FOR THE MEANS AND METHODS NECESSARY FOR THE CONSTRUCTION OF THE PROJECT AS SHOWN ON THESE PLANS.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE PERMITTING AUTHORITY TO PROVIDE THE REQUIRED COORDINATION, DOCUMENTATION AND INSPECTIONS FOR THE RELOCATION OF, OR CONNECTION TO ANY EXISTING UTILITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSPECTIONS REQUIRED TO PREPARE AS-BUILT CERTIFICATIONS.
8. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ANY OFFSITE EASEMENTS.
9. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY RIGHT OF WAY EASEMENTS AND ENCROACHMENT AGREEMENTS HAVE BEEN OBTAINED.
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14. ALL GRADING, SLOPES TO BUILDING ACCESS/EGRESS POINTS, HANDICAP RAMPS, STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE.

**GENERAL UTILITY CONSTRUCTION NOTES**

1. ALL WATER DISTRIBUTION AND SANITARY SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE HARNETT REGIONAL WATER STANDARDS AND SPECIFICATIONS FOR WATER AND SEWER.
2. CONSTRUCTION MATERIALS SHALL BE AS SPECIFIED BY HARNETT REGIONAL WATER.
3. EXISTING MAINS ARE SHOWN TO THE EXTENT POSSIBLE AND ARE GENERALLY NOTED "APPROXIMATE LOCATION, DEPTH UNKNOWN". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE EXISTING FACILITIES BY DIGGING A TEST PIT TO VERIFY EXISTING MAIN LOCATION, SIZE, DEPTH, AND MATERIAL.
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6. MAIN LOCATIONS, VALVE LOCATIONS, HYDRANT LOCATIONS, AND SERVICE LOCATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES. REFER TO STANDARD DETAILS FOR PRECISE LOCATION OF THESE ITEMS.

**TRASH COLLECTION**

1. TRASH COLLECTION TO BE PROVIDED VIA ROLL-OUT TRASH CANS.

**MAINTENANCE**

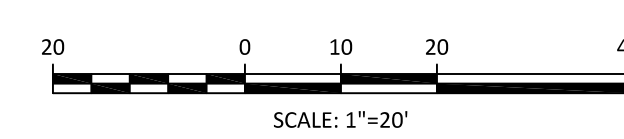
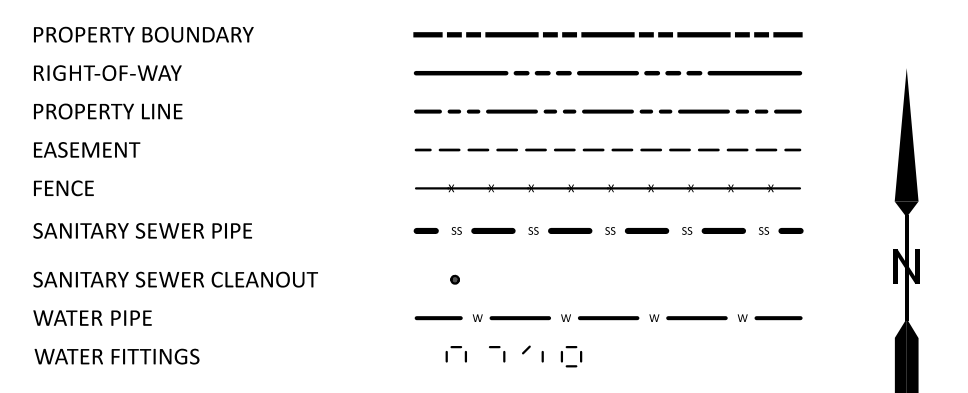
1. THE WOODGROVE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE POOL, CLUBHOUSE, PARKING AREAS, LANDSCAPING, AND OTHER SITE FEATURES WITHIN THE AMENITY AREA.

**PARKING CALCULATIONS**

REQUIRED PARKING FOR CLUBHOUSE (1 SPACES / 200 SF)	9 SPACES
REQUIRED PARKING FOR POOL	20 SPACES
TOTAL REQUIRED PARKING	29 SPACES
TOTAL PROVIDED PARKING	49 SPACES

THESE PLANS ARE FOR THE CONSTRUCTION OF THE WOODGROVE AMENITY CENTER ONLY. REFER TO APPROVED WOODGROVE CONSTRUCTION DRAWINGS PREPARED BY TIMMONS GROUP FOR ALL INFRASTRUCTURE AND LOT DESIGN.

**SITE/UTILITY PLAN LEGEND**



NO.	DATE	REVISION DESCRIPTION

05/06/2022

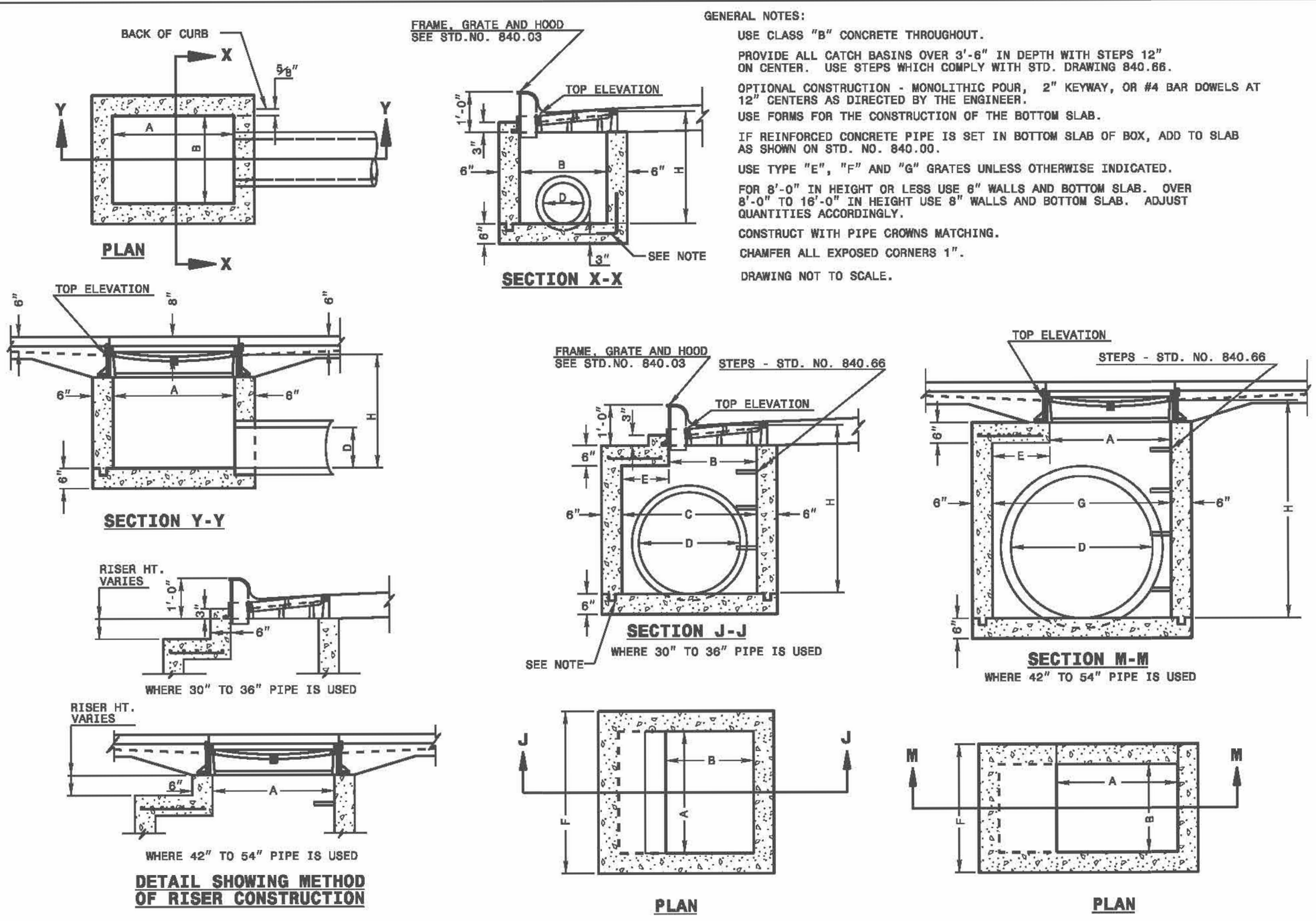
**ALD**  
ARNOLD LAND DESIGN  
113 YOSEMITE COURT  
HOLLY SPRING, NC 27540  
(919) 890-2524

DATE: 2022-05-06	DESIGN BY: JDA	DRAWN BY: JDA
SCALE: 1"=20'		

**WOODGROVE AMENITY CENTER**  
HARNETT COUNTY, NC  
**SITE AND UTILITY PLAN**

SHEET NO:	<b>C2.0</b>
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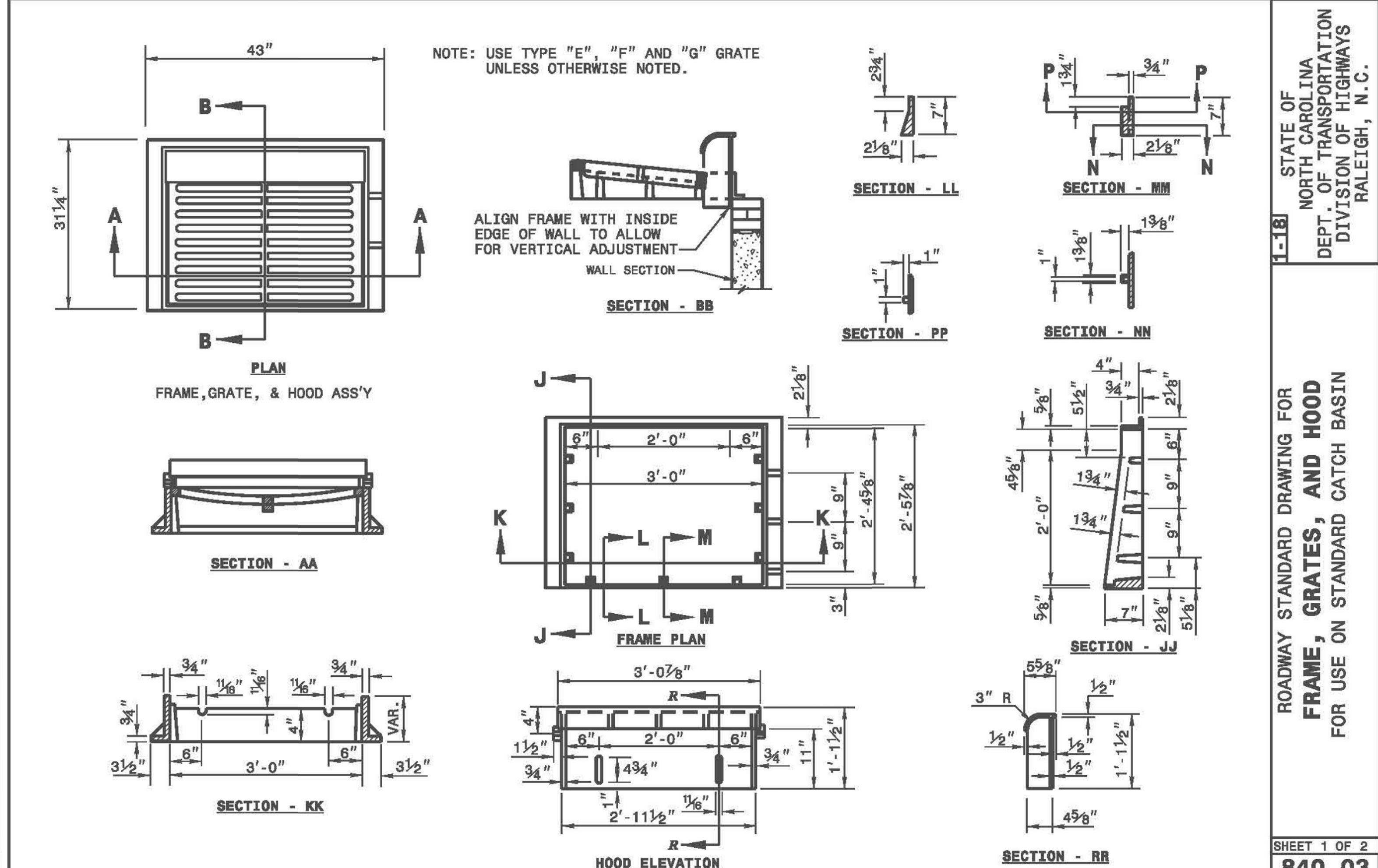
FINAL DRAWING - RELEASED FOR CONSTRUCTION



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

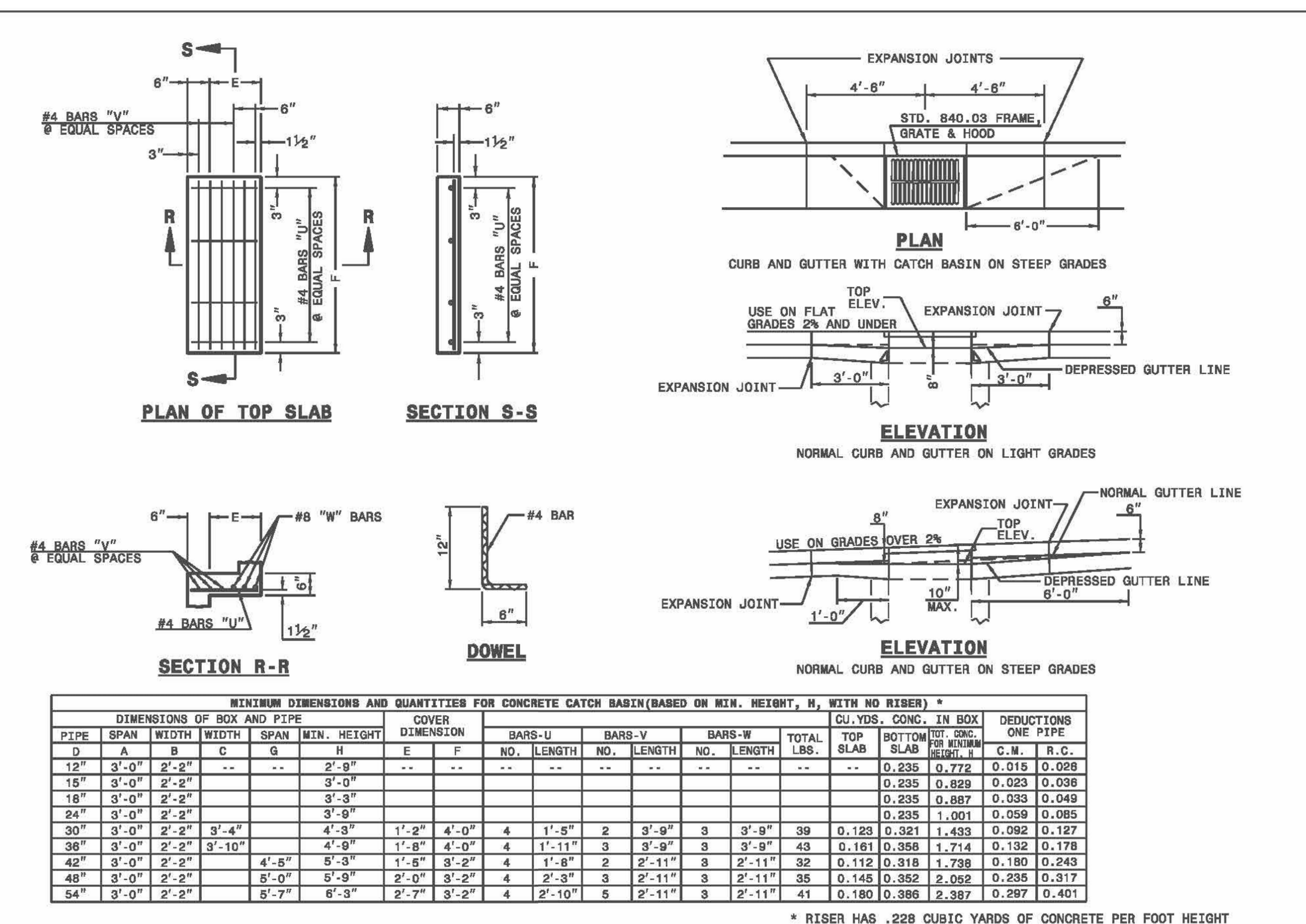
SHEET 1 OF 2 840.02



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

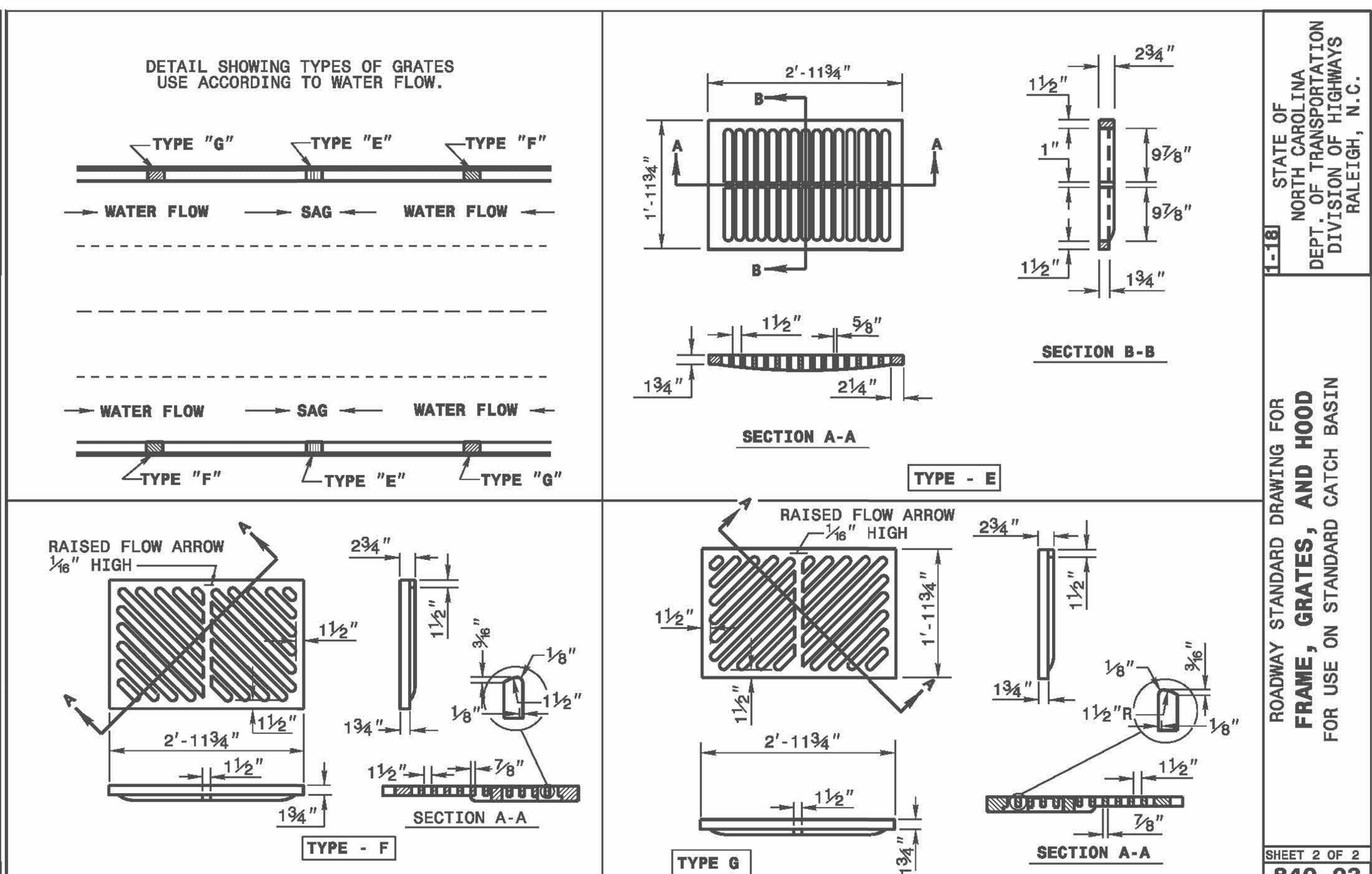
SHEET 1 OF 2 840.03



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 2 OF 2 840.02



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2 840.03

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER) *																		
PIPE D	DIMENSIONS OF BOX AND PIPE				COVER DIMENSION		CU. YDS. CONC. IN BOX					DEDUCTIONS ONE PIPE						
	SPAN A	WIDTH B	WIDTH C	SPAN G	MIN. HEIGHT E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOTAL LBS.	TOP SLAB	BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	0.235	0.772	0.015	0.028		
16"	3'-0"	2'-2"	--	--	3'-0"	--	--	--	--	--	--	--	0.235	0.829	0.023	0.038		
18"	3'-0"	2'-2"	--	--	3'-3"	--	--	--	--	--	--	--	0.235	0.887	0.033	0.049		
24"	3'-0"	2'-2"	--	--	3'-9"	--	--	--	--	--	--	--	0.235	1.001	0.059	0.085		
30"	3'-0"	2'-2"	3'-4"	4'-3"	4'-3"	1'-2"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.128	0.321	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"	4'-9"	4'-9"	1'-8"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.366	1.714	0.132	0.178
42"	3'-0"	2'-2"	--	4'-5"	5'-3"	1'-6"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243
48"	3'-0"	2'-2"	--	5'-0"	5'-9"	2'-0"	4	2'-3"	3	2'-11"	3	2'-11"	35	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"	--	5'-7"	6'-3"	2'-7"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.180	0.386	2.387	0.297	0.401

\* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

REVISION DESCRIPTION

NO.	DATE	DESCRIPTION

SEAL

05/06/2022

ALD

ARNOLD LAND DESIGN

113 YOSEMITE COURT

HOLLY SPRING, NC 27540

(919) 880-2522

DESIGN BY: JDA

DATE: 2022-05-06

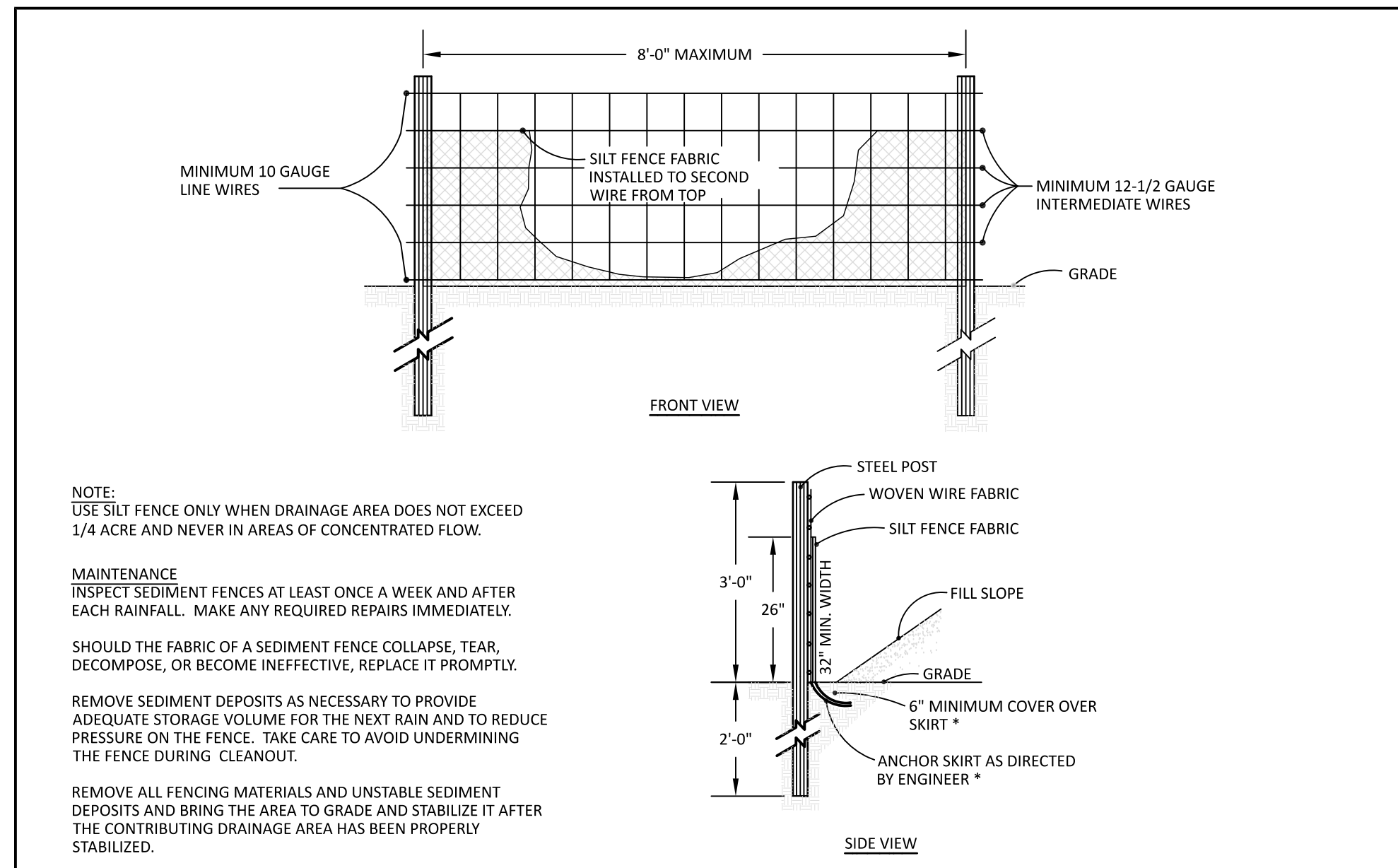
SCALE: NTS

DRAWN BY: JDA

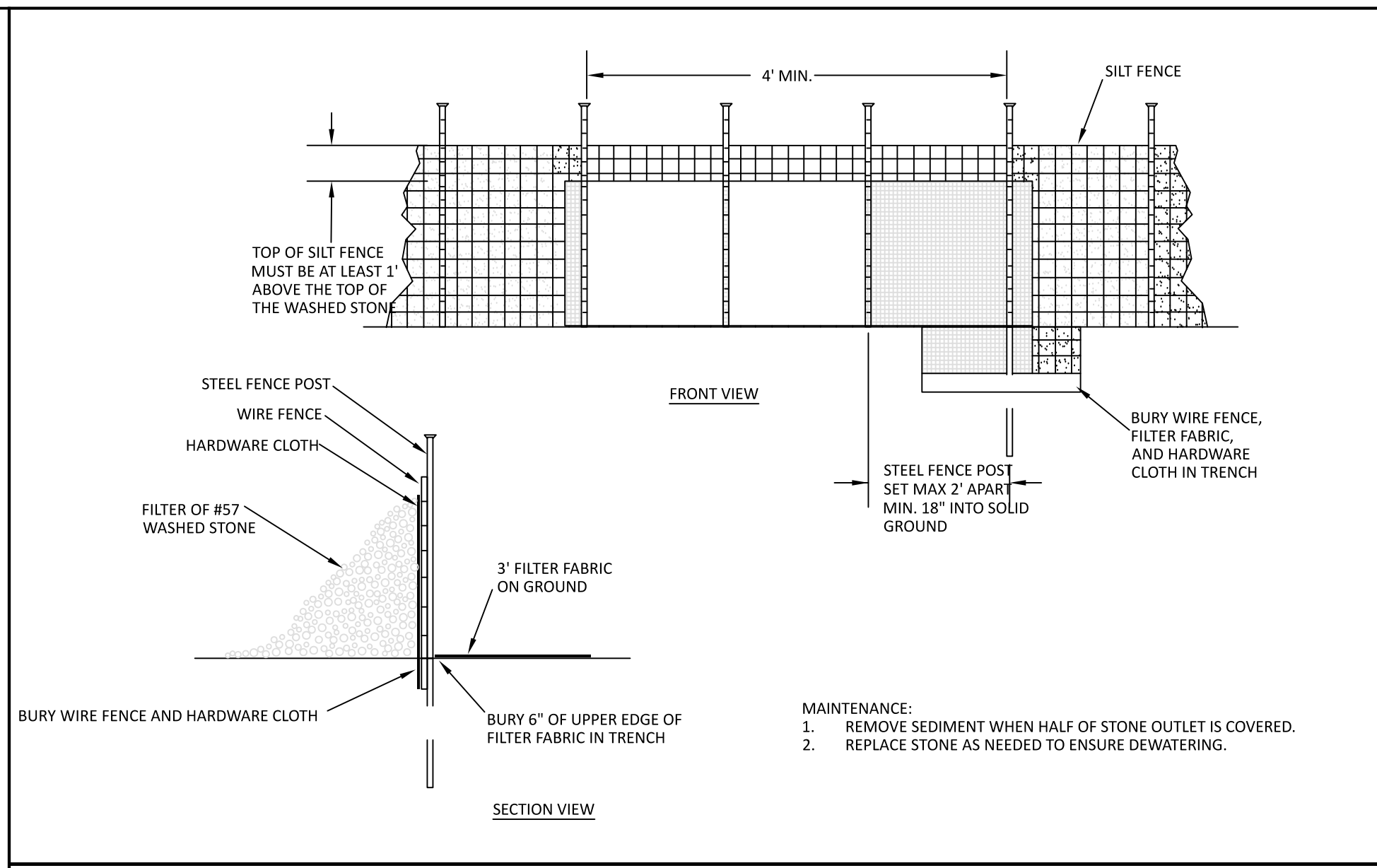
WOODGROVE AMENITY CENTER

HARNETT COUNTY, NC

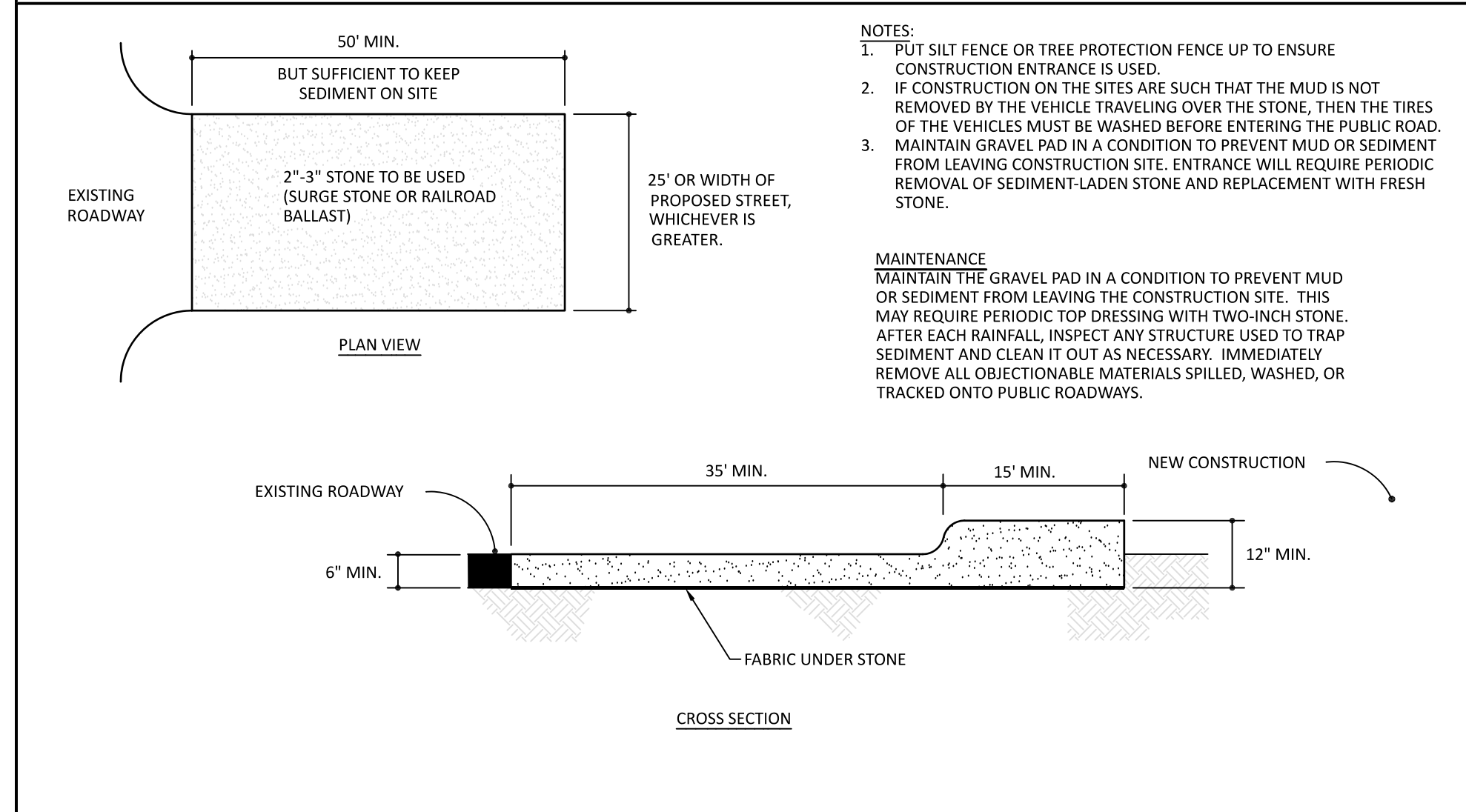
STORM DRAINAGE DETAILS



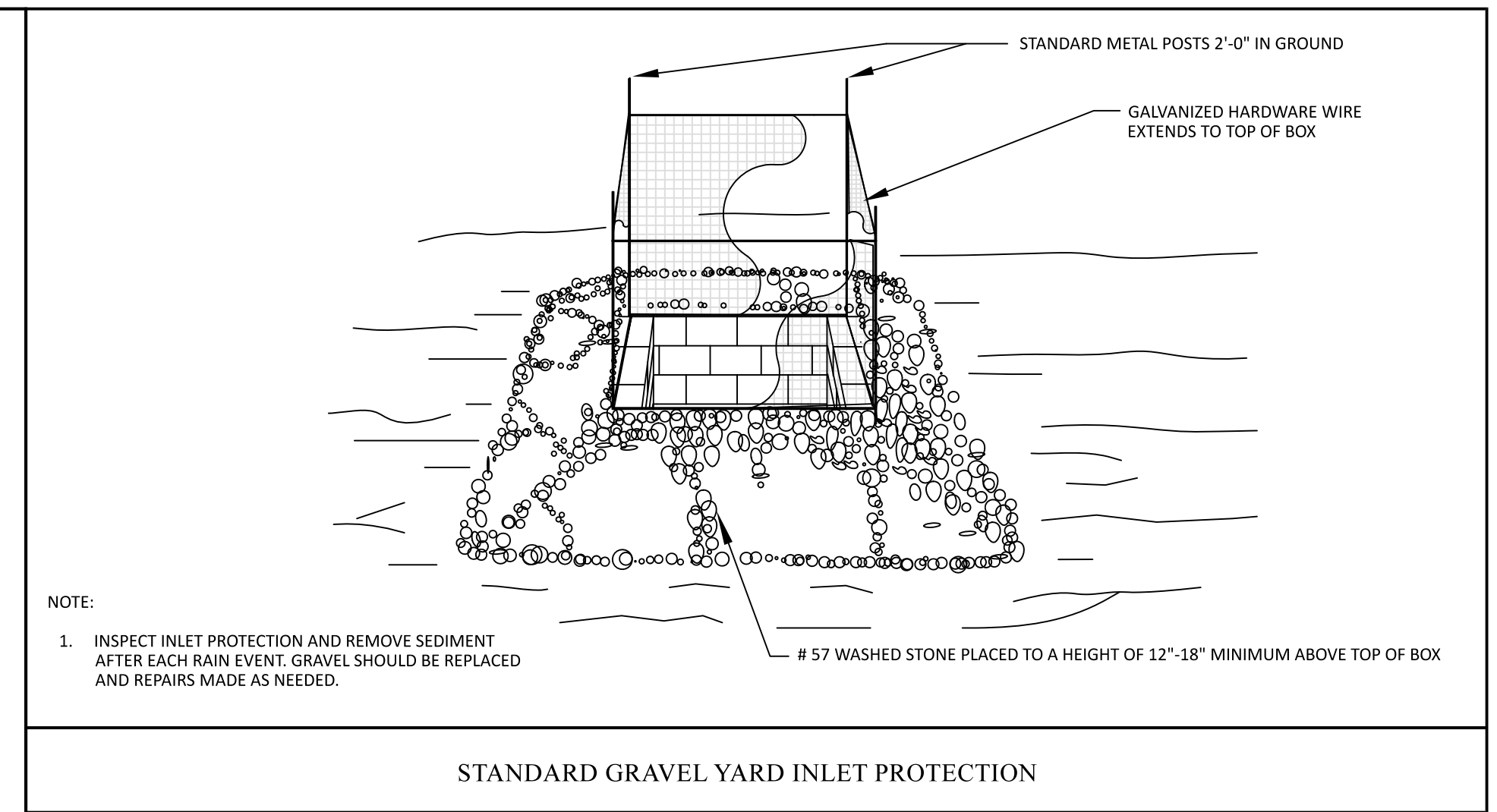
STANDARD TEMPORARY SILT FENCE



STANDARD SILT FENCE OUTLET

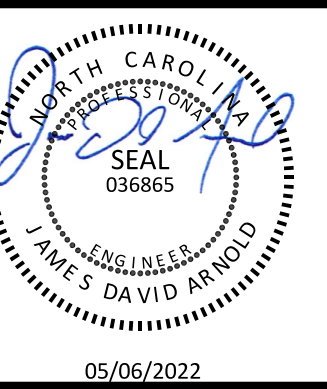


STANDARD CONSTRUCTION ENTRANCE



STANDARD GRAVEL YARD INLET PROTECTION

REVISION DESCRIPTION	DATE	NO.



05/06/2022

**ALD**  
ARNOLD LAND DESIGN  
113 YOSEMITE COURT  
HOLLY SPRING, NC 27540  
(919) 880-2572

DESIGN BY:	JDA	DRAWN BY:	JDA
DATE:	2022-05-06	SCALE:	NTS

WOODGROVE AMENITY CENTER  
HARNETT COUNTY, NC  
EROSION CONTROL DETAILS

SHEET NO:  
**D4**

**NO MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH A GENERAL PERMIT**

and specifications on this plan sheet will result in the construction compliant with the Ground Stabilization and Materials Handling Construction General Permit (Sections E and F, respectively). The Erosion and Sediment Control plan approved by the jurisdiction. All details and specifications shown on this sheet are site conditions and the delegated authority having jurisdiction.

**STABILIZATION**

**Square Ground Stabilization Timeframes**

Table with 2 columns: Stabilize within this many calendar days after ceasing land disturbance, Timeframe variations. Rows include 7 days for slopes less than 2:1, 7 days for slopes greater than 2:1, and 14 days for slopes greater than 4:1.

cessation of construction activities, any areas with temporary erosion control measures shall be converted to permanent ground stabilization as soon as possible. Erosion control measures shall be maintained in a manner to render the area stable until permanent ground stabilization is achieved.

**STABILIZATION SPECIFICATION**

so that rain will not dislodge the soil. Use one of the following:

Table with 2 columns: Stabilization, Permanent Stabilization. Lists methods like permanent grass seed, geotextile fabrics, hydroseeding, and mulch.

**STABILIZATION AND FLOCCULANTS**

are appropriate for the soils being exposed during construction from the NC DWR List of Approved PAMs/Flocculants. or before the inlets to Erosion and Sediment Control Measures. the concentrations specified in the NC DWR List of Approved PAMs/Flocculants in accordance with the manufacturer's instructions.

leak-proof containers that are kept under storm-resistant cover and secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- 1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible...
4. Collect all spent fluids, store in separate containers...
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- 1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

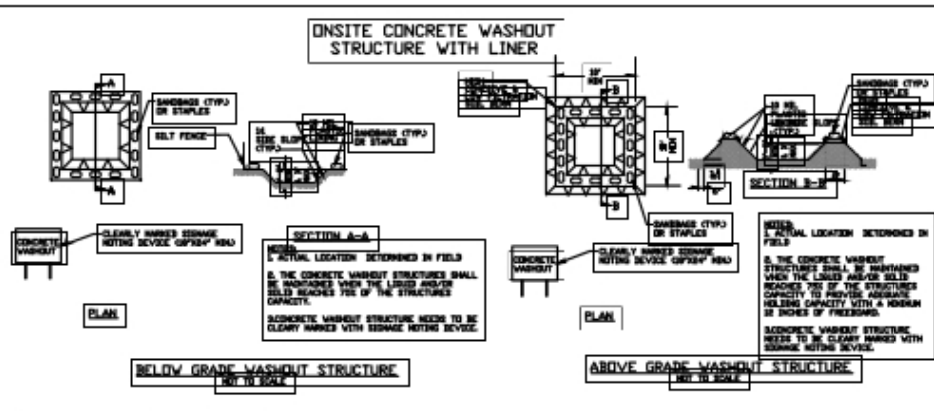
- 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- 1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- 1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



**CONCRETE WASHOUTS**

- 1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

- 1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, storm drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

**HAZARDOUS AND TOXIC WASTE**

- 1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

**SEEDING SPECIFICATIONS**

COMPLETE GRADING BEFORE PREPARING SEEDBEDS, AND INSTALL ALL NECESSARY EROSION CONTROL PRACTICES SUCH AS, DIKES, WATERWAYS, AND BASINS. MINIMIZE STEEP SLOPES BECAUSE THEY MAKE SEEDBED PREPARATION DIFFICULT AND INCREASE THE EROSION HAZARD. IF SOILS BECOME COMPACTED DURING GRADING, LOOSEN THEM TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW.

SEEDBED PREPARATION: GOOD SEEDBED PREPARATION IS ESSENTIAL TO SUCCESSFUL PLANT ESTABLISHMENT. A GOOD SEEDBED IS WELL-PULVERIZED, LOOSE, AND UNIFORM. WHERE HYDROSEEDING METHODS ARE USED, THE SURFACE MAY BE LEFT WITH A MORE IRREGULAR SURFACE OF LARGE CLODS AND STONES.

LIMING—APPLY LIME ACCORDING TO SOIL TEST RECOMMENDATIONS. IF THE PH (ACIDITY) OF THE SOIL IS NOT KNOWN, AN APPLICATION OF GROUND AGRICULTURAL LIMESTONE AT THE RATE OF 1 TO 1 1/2 TONS/ACRE ON COARSE-TEXTURED SOILS AND 2-3 TONS/ACRE ON FINE-TEXTURED SOILS IS USUALLY SUFFICIENT. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. SOILS WITH A PH OF 6 OR HIGHER NEED NOT BE LIMED. FERTILIZER—BASE APPLICATION RATES ON SOIL TESTS. WHEN THESE ARE NOT POSSIBLE, APPLY A 10-10-10 GRADE FERTILIZER AT 700-1,000 LB/ACRE. BOTH FERTILIZER AND LIME SHOULD BE INCORPORATED INTO THE TOP 4-6 INCHES OF SOIL. IF A HYDRAULIC SEEDER IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE APPLICATION. SURFACE ROUGHENING—IF RECENT TILLAGE OPERATIONS HAVE RESULTED IN A LOOSE SURFACE, ADDITIONAL ROUGHENING MAY NOT BE REQUIRED. EXCEPT FOR LARGE CLODS, IF RAINFALL CAUSES THE SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING BY DISKING, RAKING, HARROWING, OR OTHER SUITABLE METHODS. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE SEEDING (PRACTICE 6.03, SURFACE ROUGHENING).

PLANT SELECTION: SELECT AN APPROPRIATE SPECIES OR SPECIES MIXTURE FROM TABLE 6.10A FOR SEEDING IN LATE WINTER AND EARLY SPRING, TABLE 6.10B FOR SUMMER, AND TABLE 6.10C FOR FALL. IN THE MOUNTAINS, DECEMBER AND JANUARY SEEDINGS HAVE POOR CHANCES OF SUCCESS. WHEN IT IS NECESSARY TO PLANT AT THESE TIMES, USE RECOMMENDATIONS FOR FALL AND A SECURELY TACKED MULCH.

SEEDING: EVENLY APPLY SEED USING A CYCLONE SEEDER (BROADCAST), DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. USE SEEDING RATES GIVEN IN TABLES 6.10A-6.10C. BROADCAST SEEDING AND HYDROSEEDING ARE APPROPRIATE FOR STEEP SLOPES WHERE EQUIPMENT CANNOT BE DRIVEN. HAND BROADCASTING IS NOT RECOMMENDED BECAUSE OF THE DIFFICULTY IN ACHIEVING A UNIFORM DISTRIBUTION. SMALL GRAINS SHOULD BE PLANTED NO MORE THAN 1 INCH DEEP, AND GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. BROADCAST SEED MUST BE COVERED BY RAKING OR CHAIN DRAGGING, AND THEN LIGHTLY FIRMED WITH A ROLLER OR CULTIPACKER. HYDROSEEDING MIXTURES SHOULD INCLUDE A WOOD FIBER (CELLULOSE) MULCH.

MULCHING: THE USE OF AN APPROPRIATE MULCH WILL HELP ENSURE ESTABLISHMENT UNDER NORMAL CONDITIONS, AND IS ESSENTIAL TO SEEDING SUCCESS UNDER HARSH SITE CONDITIONS (PRACTICE 6.14, MULCHING). HARSH SITE CONDITIONS INCLUDE: SEEDING IN FALL FOR WINTER COVER (WOOD FIBER MULCHES ARE NOT CONSIDERED ADEQUATE FOR THIS USE), SLOPES STEEPER THAN 3:1, EXCESSIVELY HOT OR DRY WEATHER, ADVERSE SOILS (SHALLOW, ROCKY, OR HIGH IN CLAY OR SAND), AND AREAS RECEIVING CONCENTRATED FLOW. IF THE AREA TO BE MULCHED IS SUBJECT TO CONCENTRATED WATERFLOW, AS IN CHANNELS, ANCHOR MULCH WITH NETTING (PRACTICE 6.14, MULCHING).

FROM: DEMLR EC MANUAL SECTION 6.10 REVISED 5/13

**SEEDING MAINTENANCE**

RESEED AND MULCH AREAS WHERE SEEDLING ESTABLISHMENT IS POOR, OR WHERE EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE.

FROM: DEMLR EC MANUAL SECTION 6.10 REVISED 5/13

**TEMP. SEEDING FOR LATE WINTER/EARLY SPRING**

SEEDING MIXTURE: RYE (GRAIN) @ 120 LB/ACRE, ANNUAL LESPEDEZA (KOB) IN PIEDMONT AND COASTAL PLAIN, KOREAN (MOUNTAINS) @ 50 LB/ACRE, OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SEEDING DATES: FEB. 1 - MAY 1, PIEDMONT—JAN. 1 - MAY 1, COASTAL PLAIN—DEC. 1 - APR. 15

SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH: APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

FROM: DEMLR EC MANUAL SECTION 6.10 REVISED 5/13

**TEMP. SEEDING FOR SUMMER**

SEEDING MIXTURE: GERMAN MILLET @ 40 LB/ACRE, IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDAGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.

SEEDING DATES: MOUNTAINS—MAY 15 - AUG. 15, PIEDMONT—MAY 1 - AUG. 15, COASTAL PLAIN—APR. 15 - AUG. 15

SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH: APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

FROM: DEMLR EC MANUAL SECTION 6.10 REVISED 5/13

**TEMP. SEEDING FOR FALL**

SEEDING MIXTURE: RYE (GRAIN) @ 120 LB/ACRE

SEEDING DATES: MOUNTAINS—AUG. 15 - DEC. 15, COASTAL PLAIN AND PIEDMONT—AUG. 15 - DEC. 30

SOIL AMENDMENTS: FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH: APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOB (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH

FROM: DEMLR EC MANUAL SECTION 6.10 REVISED 5/13

**SEEDING SCHEDULE**

Table with 3 columns: SITE AREA DESCRIPTION, STABILIZATION TIME FRAME, STABILIZATION TIME EXCEPTIONS. Rows include Perimeter Dikes, High Quality Water (HQW) Zones, Slopes Steeper Than 3:1, Slopes 3:1 or Flatter, and All Other Area with Slope Flatter Than 4:1.

\* EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE. (SECTION II, B (2)(b))

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19**

**PART III SECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

**1. E&S Plan Documentation**

The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be kept on site and available for inspection at all times during normal business hours.

Table with 2 columns: Item to Document, Documentation Requirements. Lists items like E&S plan, phase of grading, ground cover, maintenance and repair requirements, and corrective actions.

**2. Additional Documentation to be Kept on Site**

In addition to the E&S plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

**3. Documentation to be Retained for Three Years**

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

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**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**

**1. Occurrences that Must be Reported**

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more;
- They are less than 25 gallons but cannot be cleaned up within 24 hours;
- They cause sheen on surface waters (regardless of volume); or
- They are within 100 feet of surface waters (regardless of volume).
(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref. 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref. 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

**Occurrence Reporting Timeframes (After Discovery) and Other Requirements**

Table with 2 columns: Occurrence, Reporting Timeframes (After Discovery) and Other Requirements. Lists occurrences like visible sediment, oil spills, and noncompliance with reporting requirements.

**PART II, SECTION 6, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down until this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Outlet structures shall be allowed only when all of the following criteria have been met:

- 1. The drawdown shall be provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal until the E&S plan authority has approved these items.
2. Drawdown has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
3. Drawdown is treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include diked and maintained dewatering tanks, weir tanks, and filtration systems.
4. Areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above, devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
5. From the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

**NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19**

REVISION DESCRIPTION table with columns for NO., DATE, and REVISION DESCRIPTION. Includes a circular seal for David Arnold and the date 05/06/2022.

WOODGROVE AMENITY CENTER logo and contact information: ARNOLD LAND DESIGN, 113 YOSEMITE COURT, HOLLIS, NC 27540, (919) 680-2524.

Table with columns: DESIGN BY, DATE, SCALE, DRAWN BY. Values include JDA, 2022-05-06, NTS, and JDA.

WOODGROVE AMENITY CENTER logo and HARNETT COUNTY, NC. Includes a vertical title 'EROSION CONTROL DETAILS' and 'D5' at the bottom.